

Service Service Service



Service Manual

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Important Safety Notice

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Proper service and repair is important to the safe, reliable operation of all Equipment. The service procedures recommended by PHILIPS and described in this service manual are effective methods of performing service operations. Some of these service operations require the use of tools specially designed for the purpose. The special tools should be used when and as recommended.

It is important to note that this manual contains various CAUTIONS and NOTICES which should be carefully read in order to minimize the risk of personal injury to service personnel. The possibility exists that improper service methods may damage the equipment. It is also important to understand that these CAUTIONS and NOTICES ARE NOT EXHAUSTIVE. PHILIPS could not possibly know, evaluate and advise the service trade of all conceivable ways in which service might be done or of the possible hazardous consequences of each way. Consequently, PHILIPS has not undertaken any such broad evaluation. Accordingly, a servicer who uses a service procedure or tool which is not recommended by PHILIPS must first satisfy himself thoroughly that neither his safety nor the safe operation of the equipment will be jeopardized by the service method selected.

WARNING

Use of substitute replacement parts, which do not have the same specified safety characteristics may create shock, fire, or other hazards.

Under no circumstances should the original design be modified or altered without written permission from Philips.

Philips assumes no liability, express or implied, arising out of any unauthorized modification of design. Servicer assumes all liability.

FOR PRODUCTS CONTAINING LASER:

DANGER- Invisible laser radiation when open. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION- Use of controls or adjustments or performance of procedures other than those specified herein may result in hazardous radiation exposure.

CAUTION- The use of optical instruments with this product will increase eye hazard.

TO ENSURE THE CONTINUED RELIABILITY OF THIS PRODUCT, USE ONLY ORIGINAL MANUFACTURER'S REPLACEMENT PARTS, WHICH ARE LISTED WITH THEIR PART NUMBERS IN THE PARTS LIST SECTION OF THIS SERVICE MANUAL.

WARNING

- The Module is controlled by high voltage about 350V. If you need to handle the Module during operation or just after power-off, you must take proper precautions against electric shock and must not touch the drive circuit portion and metallic part of Module within 5 minutes. The capacitors in the drive circuit portion remain temporarily charged even after the power is turned off. After turning off the power, you must be sure to wait at least one minute before touching the Module. If the remain voltage is strong enough, it could result in electric shock.
- Do not use any other power supply voltage other than the voltage specified in this product specifications. If you use power voltage deviated from the specifications, it could result in product failure.
- Do not operate or install under the deviated surroundings from the environmental specification set for the below; in moisture, rain or near water-for example, bath tub, laundry tub, kitchen sink; in a wet basement; or near a swimming pool; and also near fire or heater - for example, near or over radiator or heat resistor; or where it is exposed to direct sunlight; or somewhere like that. If you use the Module in places mentioned above, it could result in electric shock, fire hazard or product failure.
- If any foreign objects (e.g. water, liquid and metallic chip or dust) entered the Module, the power supply voltage to the Module must be turned off immediately. Also, never push objects of any kind into the Module as they may touch dangerous voltage point or make short circuits that could result in fire hazard or electric shock.
- If smoke, offensive smell or unusual noise should come from the Module, the power supply voltage to the Module must be turned off immediately. Also, when the screen fails to display any picture after the power-on or during operation, the power supply must be turned off immediately. Do not continue to operate the Module under these conditions.
- Do not disconnect or connect the Module's connector while the power supply is on, or immediately after power off. Because the Module is operated by high voltage, and the capacitors in drive circuit remain temporarily charged even after the power is turned off. If you need to disconnect or reconnect it, you have to wait at least one minute after power off.
- Do not disconnect or connect the power connector by a wet hand. The voltage of the product may be strong enough to cause an electric shock.
- Do not damage the power cable of the Module, also do not modify it.
- When the power cable or connector is damaged or frayed, do not use it.
- When the power connector is covered with dust, please wipe it out with a dry cloth before power on.

NOTICE

- To prevent defect or failure, please check the cable connections and power-supply condition before power-on.
- The Module is controlled by high voltage. Not only during operation but also immediately after power-off, do not disconnect or reconnect the Module's connector because it may result in failure. If you need to disconnect or reconnect, you have to wait at least one minute after power-off.
- The Module is equipped with various protection circuits that automatically stop the Module operation, if an interface signal or the power voltage becomes abnormal during operation. If the Module stops suddenly during operation, please check the conditions of input signal or power source before restarting.
- For the protection of the circuit, if an abnormal situation is occurred, the high output voltage will be shut down by (watching) the internal input voltage (V_s / V_a / V_{cc}). In this case, the Module power resetting is necessary to recover. There are also fuses in the V_s and V_a power supply system to prevent smoking and firing by the excessive current. The protecting function of the address driver of keeping a supervisory device for the internal current is provided in the V_a power supply system. Therefore, the number of sub-frames decreases to a proper value when the I_a current exceeds a constant value occasionally.
- If an abnormal situation such as disconnecting of the input connector occurs, this Module will be on stand-by, which the supply of high output voltage is stopped even if an external power is being supplied. If a normal signal is inputted after this, normal operation state, operations can be restarted again by re-inputting a normal signal. However, it is necessary to rest the Module power when t_{VH} and/or t_{HV} are less than the minimum value provided in the specification
- To ensure reliable operation of the Module and to protect it from overheating, do not wrap or cover it with a cloth or like a sheet during power-on period. Also, do not place the Module in a confined space or any other places of poor ventilation.
- If you continue to watch the naked screen (without filter glass) for a long time, your eyes could be fatigued. We recommend you rest your eyes occasionally. However, according to the information currently available, watching PDP module for a long time does not cause a direct harm to your eyes.
- The screen is controlled with the display-data signals and synchronized signals. If noise interferes with those signals, the screen could become unstable and, in some case, would cause a failure. Do not place any equipment that generates excessive EMI/RFI noise near the interface cable of the Module, and keep the cables as short as possible.
- Be careful not to break the glass panel when you handle the Module. Also, when handling the Module, you must wear gloves or other hand protection to prevent injuries that can occur in case when the glass panel is broken.
- The glass panel section and drive circuit section of the Module are closely connected and they function as a pair. If the Module is arbitrarily recombined, restructured, or disassembled, SDI will not be responsible for the function, quality, or operational integrity of the modified Module. Do not recombine, restructure, or disassemble it. (Only, the Module for A/S is allowed to be recombined, restructured, or disassembled.)
- To avoid a possible electric shock, you must make sure that the power supply voltage of Module is turned off before cleaning. To clean the module's glass panel, apply water or a natural detergent to a piece of soft cloth or gauze, and wring the cloth tightly before wiping the screen. Make sure that no water comes in contact with the connecting terminals on the side of the glass panel. Do not use chemical solvents, such as paint thinner or benzene, to clean the glass panel.

- The drive circuit section of Module uses C-MOS integrated circuits that must be protected from static electricity. Therefore, when transporting or delivering the Module, be sure to put the Module in an antistatic bag. When handling the Module, take adequate grounding precautions to prevent static electricity.
- When delivering or transporting the Module, you must take special precautions because excessive vibration or shock should not be applied to it. If the Module is dropped, or (if) excessive vibration/shock is applied, the glass panel of the Module may be broken and the drive circuit may be damaged. The packing for delivering or transporting should be made with strict instructions.
- The information and schematics shown in this specification are just examples of display applications; it does not mean that they must be applied to your device for the actual use. SAMSUNG SDI does not take any responsibility for the infringement of patent or any other intellectual rights arising from the use of the information or schematics in the document.
- If any part or technology of the product described in this specification become subject to restrictions on export or any related laws or regulations, a prior permission is required before exporting.
- The PDP module uses semiconductor devices. Since semiconductors are very sensitive to static electricity, the following requirements should be conformed during delivering, transferring and handling the PDP module: Remove the static electricity on your body by wearing the earth-ring which must be connected to the ground through high resistor (about 1M Ohm). It is recommended to wear the conductive clothes and shoes, use conductive floor mats, and take other measures to minimize the static electricity. All the equipments and tools must be connected to the ground and protected from static electricity. When you deliver or transfer the PDP module, always use anti-static bag.
- If any device that can generate the high-voltage is located nearby the PDP module, it could cause an abnormal operation. In such a case, you should take a countermeasure to prevent against static electricity and discharges.
- If the PDP module is exposed to corrosive gases or contacted to oil, it could cause chemical reactions and give unfavorable effects on the devices. If you intend to use the PDP module under such conditions, you must consider the ways to avoid exposure or to protect the PDP module before using it.
- The PDP module is not designed to endure radiation or cosmic radiation. Users must install the proper shielding.
- The PDP module uses thermo-plastic devices. Since these devices are easy to be damaged, do not use the PDP module nearby inflammable substances. If they are burnt, poisonous gas will be emitted.
- To ensure the normal operation of the PDP module, the recommended operating range should be required. The electrical properties of the PDP module are guaranteed only when it is used within the recommended operating range. The PDP module must be used within the range at all time. If you use it out of the range, it could give adverse effects on its reliability or cause defects.
- Flexible cables connect electrodes on the panel glass and PCBs. Thus, do not apply too much stress such as shock, vibration, pressure, or bending, to the surface of panel glass, PCBs and flexible cables.
- If there is no special notice, the contents of this specification describe the product with the initial parameters after shipment.

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- Even if the panel glass is cleaned before shipping, there is a possibility of particle remained on the panel. In this case, remove it prior to the usage. When you clean the surface of the panel glass, use a piece of soft cloth with detergent to wipe off. Do not use any chemical substances such as acid, alkali or organic detergent.
- The Module is composed of various kinds of materials such as glass, metals and plastics. A qualified service technician is required for the disposal of the Module.

CAUTION

- Do not set the Module on an unstable, vibrating or inclined place. The Module may fall or collapse and it may cause a serious injury to a person, and/or damage to the product.
- If you need to remove the Module to another place, you must turn off the power supply and detach the interface cable and power cable from the Module beforehand, and watch your steps not to step on the cables during the operation. If the cables are damaged during the transport, it may result in fire hazard or electric shock. Also if the Module is dropped or fallen, it may cause a serious injury to a person and /or damage to the product.
- When you draw or insert the module's cable, you must turn off the power supply and do it (with) holding the connector. If you forcibly draw the cable, the electric wire in the cable can be exposed or broken. It may result in fire hazard or electric shock.
- When you carry the Module, it should be done with at least two workers in order to avoid any unexpected accidents.
- Be careful not to touch the panel glass surface while the PDP module is operating because there is a possibility of getting a burn injury due to its very high temperature.
- The Module has a glass-plate. If the Module is inflicted with excessive stress – for example; shock, vibration, bending or heat-shock, the glass plate could be broken. It may result in a personal injury. Also, do not press or strike the glass surface.
- If the glass panel was broken, do not touch it with bare hand. It may result in a cut injury.
- Do not place any object on the glass panel. It may be the cause of the scratch or break of the glass panel.
- Do not place any object on the Module. It may result in a personal injury due to fall or drop.
- PDP is a product, which generates heat during operation. Therefore, do not use the materials which make corrode the PDP module by the chemical reaction that takes place in high temperature and humidity conditions.
- Exposing to corrosive gases or contact with the materials, which may cause corrosions, could lead to chemical reactions that will adversely affect on the device. If you were to use the PDP in such conditions, consider ways to avoid such exposure or to protect the PDP module.

General Specification

Item			Specification	
Component INPUT	Rear*2	Y	1000mV(p-p), 75 ohm	Suggested resolutions: 1080i/60Hz, 720p/60Hz, 480p, 480i
		Pr/Cr	350mV (p-p), 75 ohm	
		Pb/Cb	350mV (p-p), 75 ohm	
		AUDIO	500 mV	
HDMI INPUT	Rear*1	As in HDMI Specification 1.0		
Video INPUT	Side*1 Rear*3	Video	1000mVpp (including 300 mV sync level), 75 ohm	
		Audio	500 mV	
S-Video INPUT	Side*1 Rear*1	S-Video	Y: 1000mVpp, 75 ohm C: 300mVpp, 75 ohm	
		Audio	500 mV	
Digital out	Rear*1	Audio	Digital audio out only for ATSC mode	
Television	NTSC standard ATSC standard		TV RF input system: NTSC analog, ATSC terrestrial 8-VSB and cable 16-VSB or 256 QAM. TV RF input level: 10mV (80dBuV) typical, 25dBuV ~ 100dBuV receiving	
Audio Power	Speaker output		10w x 2 with T.H.D. < 10%	
Power	Power input sources		90~264V, 50/60±3Hz	
	Power consumption		450 W (on average) / 1W in standby mode (power cord plugged in and DC power OFF)	
Unit Dimension	Width x Height x Depth		With Stand: 1038 x 685 x 298 (mm)	
Net weight	With Stand		39 kg	
Accessory	1pcs power cord, 1pcs remote control, (with two *AAA*sized alkaline batteries)			
Choose Part	Wall Mounting Bracket			

Plasma Panel

No	Item	Rating	
1	Display Pixels	Horizontal 1,024 ×Vertical 768 pixels (1 pixel = 1 R,G,B cells)	
2	Display Cells	Horizontal 3,072 ×Vertical 768 cells	
3	Pixel Pitch	Horizontal 0.912 mm×Vertical 0.693 mm	
4	Cell Size	R	Horizontal 0.304 mm×Vertical 0.693 mm
		G	Horizontal 0.304 mm×Vertical 0.693 mm
		B	Horizontal 0.304 mm×Vertical 0.693 mm
5	Pixel Type	R, G, B Matrix (refer to Figure-1)	
6	Effective Display Size	Horizontal 933.89 mm×Vertical 532.22 mm	
7	Number of color	1073.7 million colors (10Bit); 16.77 million colors (8Bits)	
8	Peak Luminance *1 (peak algorithm on)	NTSC : Typical 1,100 cd/m ² , Minimum 850 cd/m ² PAL : Typical 1,000 cd/m ² , Minimum 800 cd/m ²	
9	Contrast Ratio *2 (in dark room, peak algorithm on)	NTSC : Typical 10,000:1, Minimum 5,000:1 PAL : Typical 5,000:1, Minimum 3,000:1	
10	Brightness (Full white Brightness)	NTSC : Minimum 170 cd/ m ² , Typical 200 cd/ m ² PAL : Minimum 160 cd/ m ² , Typical 200 cd/ m ²	
11	Viewing Angle *3	Over 160°	

(Note)

- * 1. Luminance and Color Coordinates are the values that were measured with 1% load ratio white pattern.
- * 2. Contrast Ratio is calculated from the display Luminance and the non-display Luminance value.
- * 3. Viewing angle is a critical angle at which the Luminance is reduced to 50% to the Luminance perpendicular to the PDP Module. The contact luminance meter CA-100+H is used to measure the Luminance.

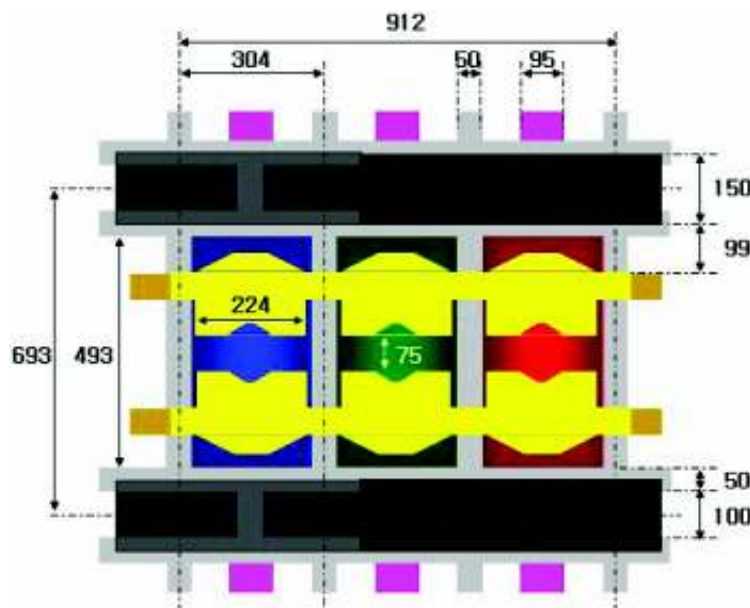


Figure-2. Display Cell Arrangement

TV Turning mode

- NAFTA NTSC system - Preset 125 cable, 69 off air.
- NAFTA ATSC system - Terrestrial 8-VSB, cable 16-VSB or 256 QAM.
- Search time - < 30 min.
- Band- Antenna and cable
- NAFTA analog antenna channels table:

Ch.	Freq.	Ch.	Freq.	Ch.	Freq.	Ch.	Freq.
		14	471.25	33	585.25	52	699.25
02	55.25	15	477.25	34	591.25	53	705.25
03	61.25	16	483.25	35	597.25	54	711.25
04	67.25	17	489.25	36	603.25	55	717.25
		18	495.25	37	609.25	56	723.25
05	77.25	19	501.25	38	615.25	57	729.25
06	83.25	20	507.25	39	621.25	58	735.25
		21	513.25	40	627.25	59	741.25
07	175.25	22	519.25	41	633.25	60	747.25
08	181.25	23	525.25	42	639.25	61	753.25
09	187.25	24	531.25	43	645.25	62	759.25
10	193.25	25	537.25	44	651.25	63	765.25
11	199.25	26	543.25	45	657.25	64	771.25
12	205.25	27	549.25	46	663.25	65	777.25
13	211.25	28	555.25	47	669.25	66	783.25
		29	561.25	48	675.25	67	789.25
		30	567.25	49	681.25	68	795.25
		31	573.25	50	687.25	69	801.25
		32	579.25	51	693.25		

- NAFTA analog cable channels table:

Ch.	Freq.	Ch.	Freq.	Ch.	Freq.	Ch.	Freq.
01	73.25	31	265.25	66	475.25	100	649.25
		32	271.25	67	481.25	101	655.25
02	55.25	33	277.25	68	487.25	102	661.25
03	61.25	34	283.25	69	493.25	103	667.25
04	67.25	35	289.25	70	499.25	104	673.25
		36	295.25	71	505.25	105	679.25
05	77.25	37	301.25	72	511.25	106	685.25
06	83.25	38	307.25	73	517.25	107	691.25
		39	313.25	74	523.25	108	697.25
07	175.25	40	319.25	75	529.25	109	703.25
08	181.25	41	325.25	76	535.25	110	709.25
09	187.25	42	331.25	77	541.25	111	715.25
10	193.25	43	337.25	78	547.25	112	721.25
11	199.25	44	343.25	79	553.25	113	727.25
12	205.25	45	349.25	80	559.25	114	733.25

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Ch.	Freq.	Ch.	Freq.	Ch.	Freq.	Ch.	Freq.
13	211.25	46	355.25	81	565.25	115	739.25
		47	361.25	82	571.25	116	745.25
14	121.25	48	367.25	83	577.25	117	751.25
15	127.25	49	373.25	84	583.25	118	757.25
16	133.25	50	379.25	85	589.25	119	763.25
17	139.25	51	385.25	86	595.25	120	769.25
18	145.25	52	391.25	87	601.25	121	775.25
19	151.25	53	397.25	88	607.25	122	781.25
20	157.25	54	403.25	89	613.25	123	787.25
21	163.25	55	409.25	90	619.25	124	793.25
22	169.25	56	415.25	91	625.25	125	799.25
		57	421.25	92	631.25		
23	217.25	58	427.25	93	637.25		
24	223.25	59	433.25	94	643.25		
25	229.25	60	439.25				
26	235.25	61	445.25	95	91.25		
27	241.25	62	451.25	96	97.25		
28	247.25	63	457.25	97	103.25		
29	253.25	64	463.25	98	109.25		
30	259.25	65	469.25	99	115.25		

HDMI display modes

- SDTV 640/720 x 480i
- EDTV 640/720 x 480p
- HDTV 1920 x1080i/1280 x 720p

YPbPr display modes

- 480i and 480p
- 720p/60Hz
- 1080i/60Hz

Electrical for AV/TV signal

While no signal on external inputs, screen goes black after 10 minutes.

- TV RF input system - NTSC analog, ATSC terrestrial 8-VSB and cable 16-VSB or 256 QAM.
- TV RF input level - 10mV (80dBuV) typical, 25dBuV ~ 100dBuV receiving capability, terminated with input impedance of 75Ω.
- CVBS input - 1000mVpp (including 300 mV sync level), terminated with input impedance of 75Ω.
- S-Video input - Y: 1000mVpp, C: 300mVpp, terminated with input impedance of 75Ω.
- Component video input - Y: 1000mVpp, PbPr: 350mVpp, terminated with input impedance of 75Ω. 480i/p, 720p/60Hz, 1080i/60Hz signal handling capability.
- HDMI input - As in HDMI Specification 1.0.
- Audio input - Sensitivity 500mV, the amplifier outputs full power when the input level reaches 500mV, terminated with input impedance of >10kΩ.
- Speaker output - 10w x 2 with T.H.D. < 10%.

Environmental Requirements

1. Temperature Ranges

Operating Temperature 0 to 40 degree C
 Storage Temperature -20 to 60 degree C
 Shipping Temperature -40 to 65 degree C

2. Humidity

Operating (non-condensing) 20% to 70%
 Storage (non-condensing) 5% to 95%
 Shipping (non-condensing) 5% to 95%

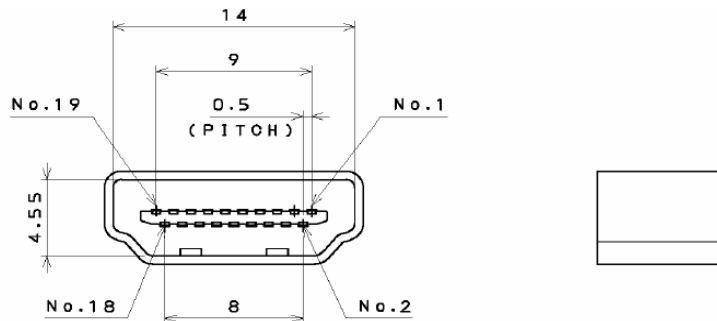
3. Altitude

Operating 0 to 2,000 m
 Storage 0 to 9,000 m
 Shipping 0 to 9,000 m

4. Air pressure

Operating 795 to 1013 mbar
 Storage 300 to 1013 mbar
 Shipping 300 to 1013 mbar

HDMI Pin Assignments



Pin	Description	Pin	Description
1	T.M.D.S Data 2 +	11	T.M.D.S Clock Shield
2	T.M.D.S Data 2 Shield	12	T.M.D.S Clock -
3	T.M.D.S Data 2 -	13	CEC
4	T.M.D.S Data 1 +	14	NC
5	T.M.D.S Data 1 Shield	15	SCL
6	T.M.D.S Data 1 -	16	SDA
7	T.M.D.S Data 0 +	17	DDC/CEC Ground
8	T.M.D.S Data 0 Shield	18	+5V Power
9	T.M.D.S Data 0 -	19	Hot Plug Detect
10	T.M.D.S Clock +		

 [Back to cover](#)**Power Indicator**

A delay of 5 seconds before entering the power saving state is required to avoid misunderstanding of display resolution and timing mode changes. The power states as given in the following table.

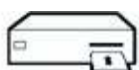
LED colors

Mode	H-Sync	V-Sync	Video	Pw-cons.	Indicator
Power-On	On	On	Active	<450W	Blue LED
Standby	Off	Off	Off	<1W	Blank LED
DC Switch-off	Off	Off	Off	<1W	Blank LED

Remote Control Receiver

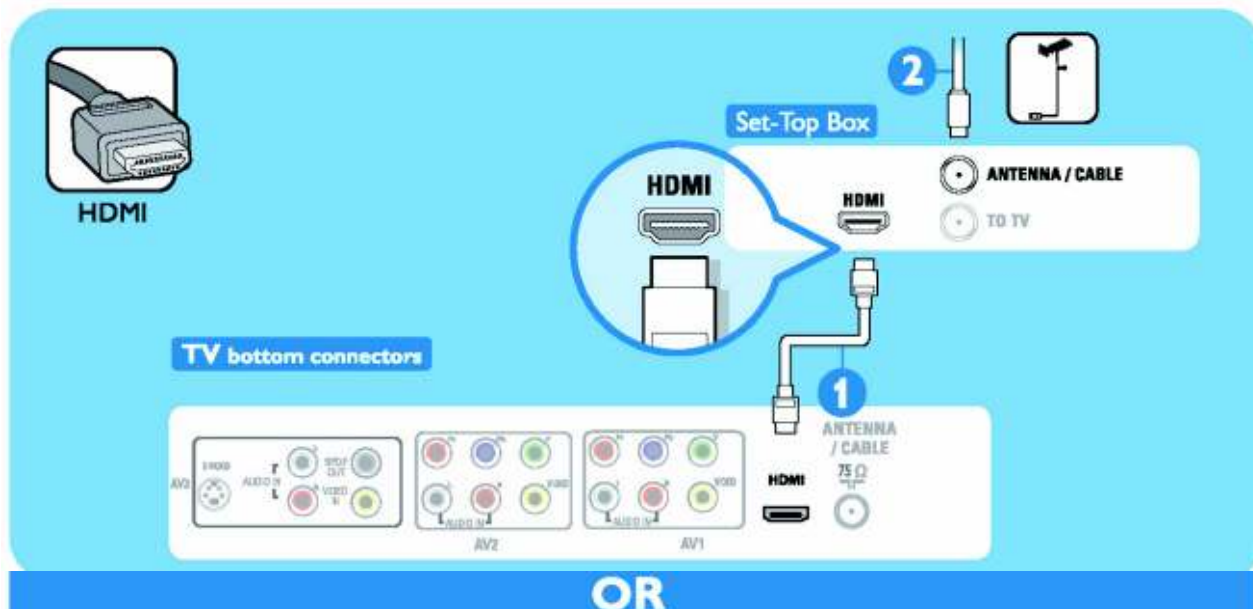
42MF231D/37 shall provide an infra-red (IR) optical detector on its front panel for use as the receiver for remote controller signal. The IR communication protocol shall conform to RC-6 standard. The required operating distance of the remote control as given in the following table.

Operation Angle	RC operational distance
0° (for H & V)	≥ 10m
30° (for H & V)	≥ 8m
45° (for H only)	≥ 6m

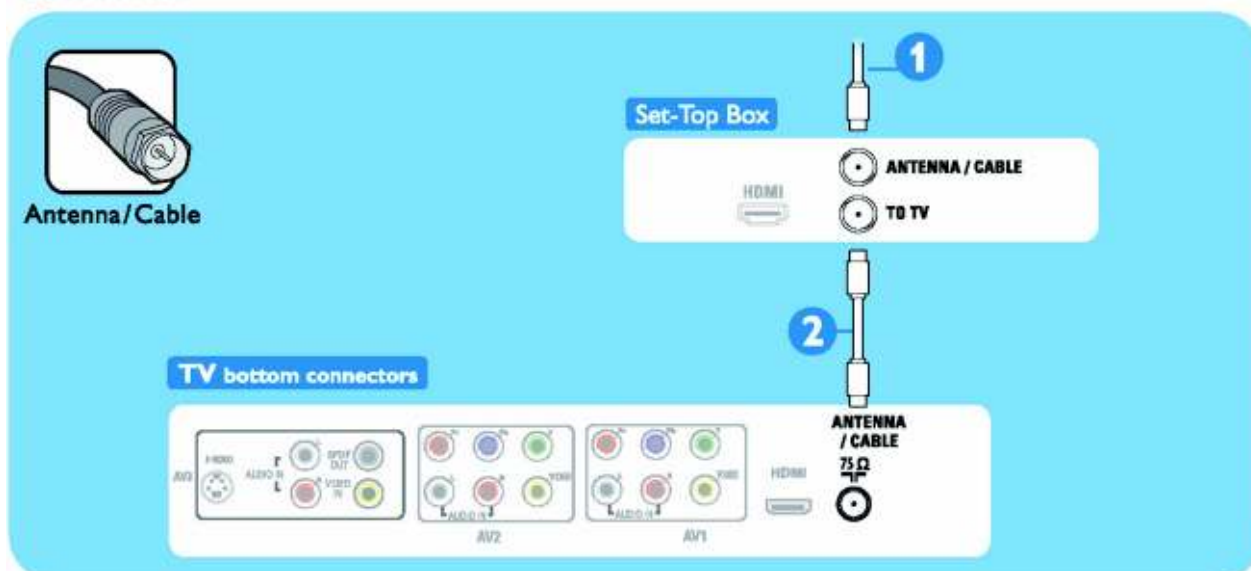


Cable or Satellite set top box

- 1 Connect the Set-Top Box to the TV using an HDMI connector cable.
- 2 Connect the antenna cable to the antenna input of the Set-Top Box.
- 3 After connecting all cables or devices switch on the TV. See user's manual p.18.



- 1 Connect the antenna cable to the antenna input of the Set-Top Box.
- 2 Connect a second antenna cable from the Set-Top Box to the TV.
- 3 After connecting all cables or devices switch on the TV.



Other possible connections



Component Video Input
See DVD Recorder



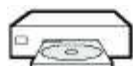
S-Video
See VCR



Composite Audio/Video
See VCR

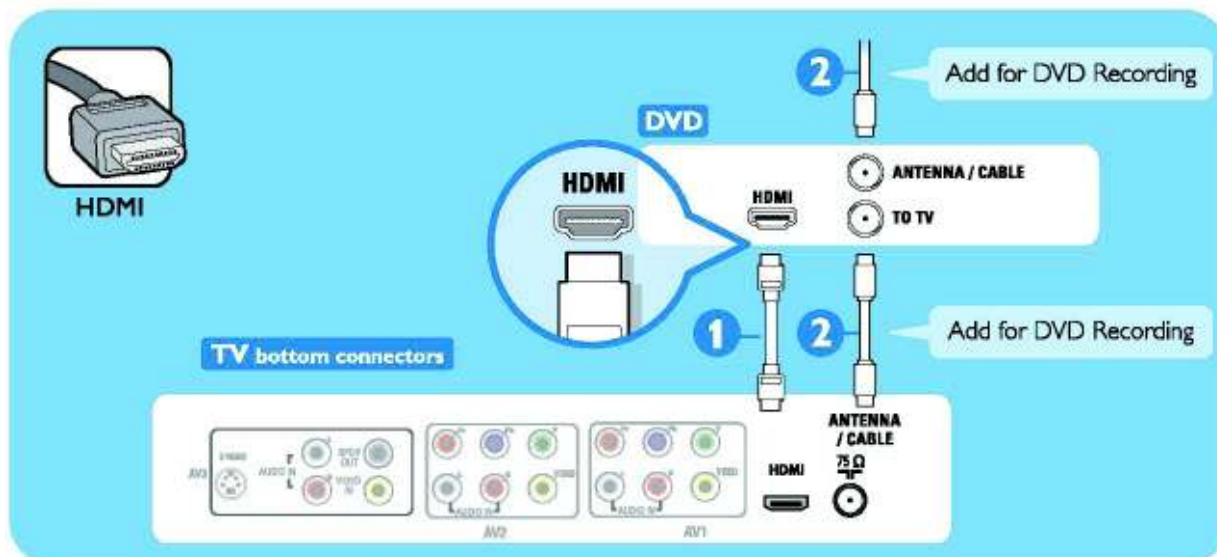
Connecting the PDP

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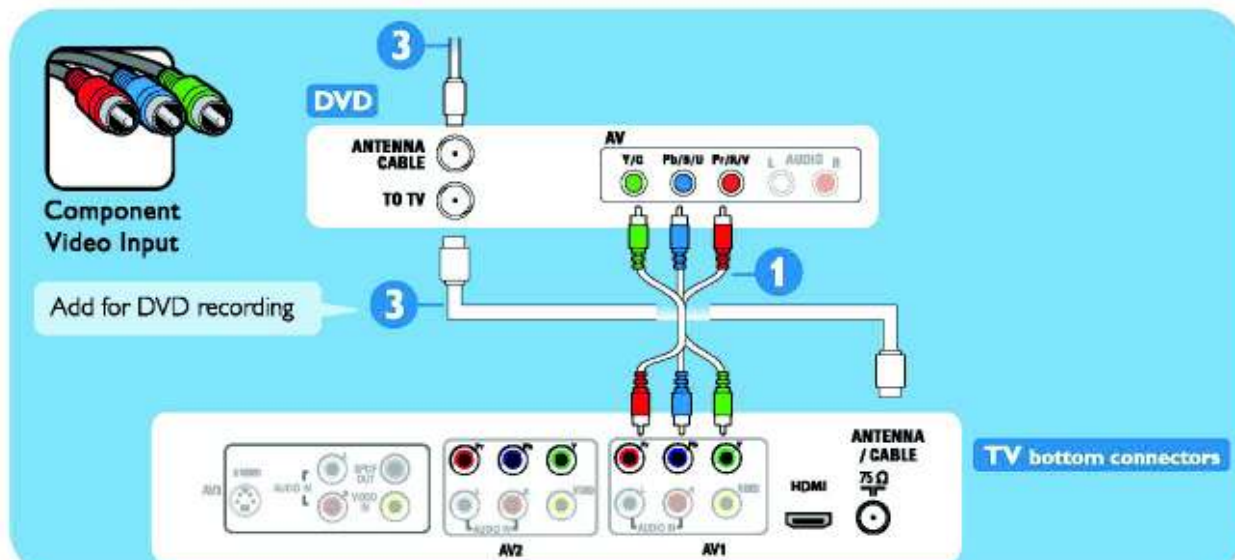
DVD Recorder/Player

- 1 Connect the DVD to the TV using an HDMI connector cable
- 2 Connect a two antenna cables for recording on the DVD
- 3 After connecting all cables or devices switch on the TV.



OR

- 1 Connect the Component Video plugs into their corresponding jacks.
- 2 For audio connect, alternatively connect red & white Audio cables.
- 3 Connect the two antenna cables for DVD Recording. After connecting all cables or devices switch on the TV.



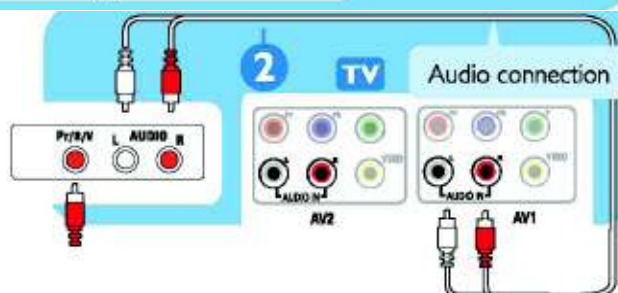
Other possible connections



S-Video
See VCR

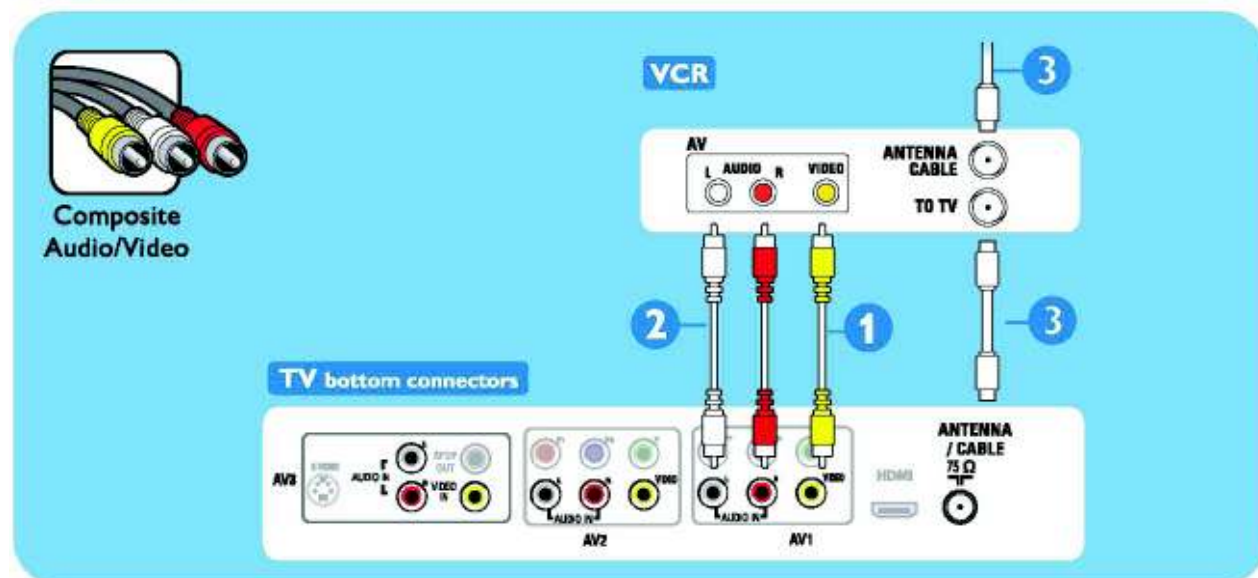


Composite
Audio/Video
See VCR



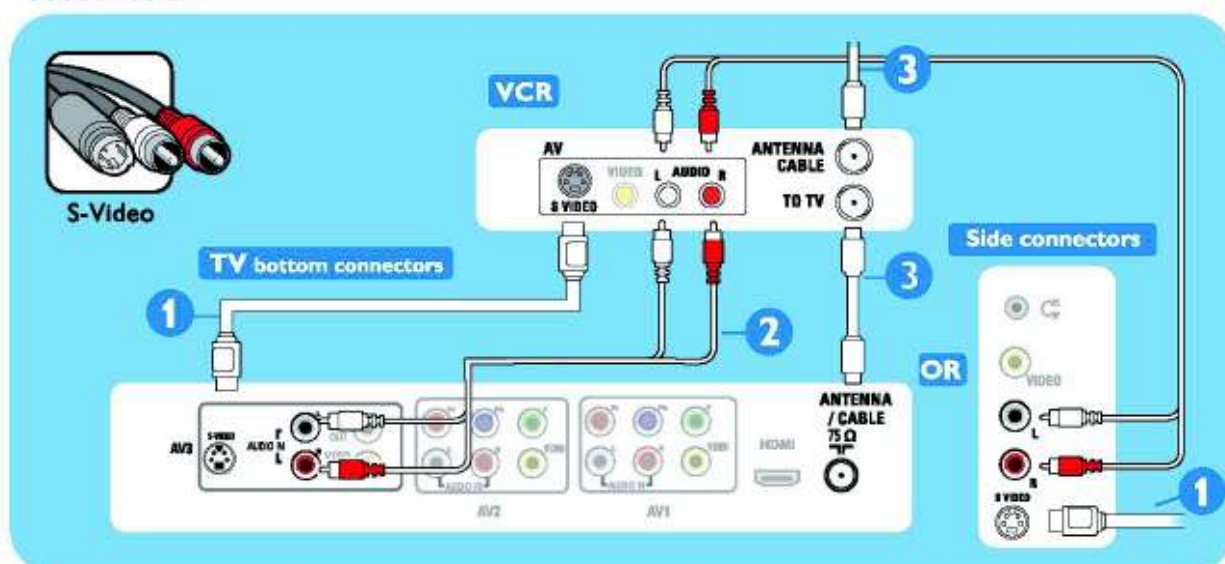


- 1 Connect the VCR with the Video cable(yellow) to the Video input of AV1,AV2 or AV3.
- 2 Connect a Audio L & R cables to the Audio L & R AV1,AV2, or AV3 input of TV.
- 3 Connect the antenna/ cable signal to the VCR and connect an antenna cable from VCR to the antenna input of TV.



OR

- 1 Connect the VCR with the S-video cable to the S-video input of AV3 or Side AV.
- 2 Connect the Audio L & R cables to the Audio L & R AV3 or Side input of TV.
- 3 Connect the antenna/ cable signal to the VCR and connect an antenna cable from VCR to the antenna input of TV.



Other possible connections



Antenna/Cable
See Cable or Satellite set top box

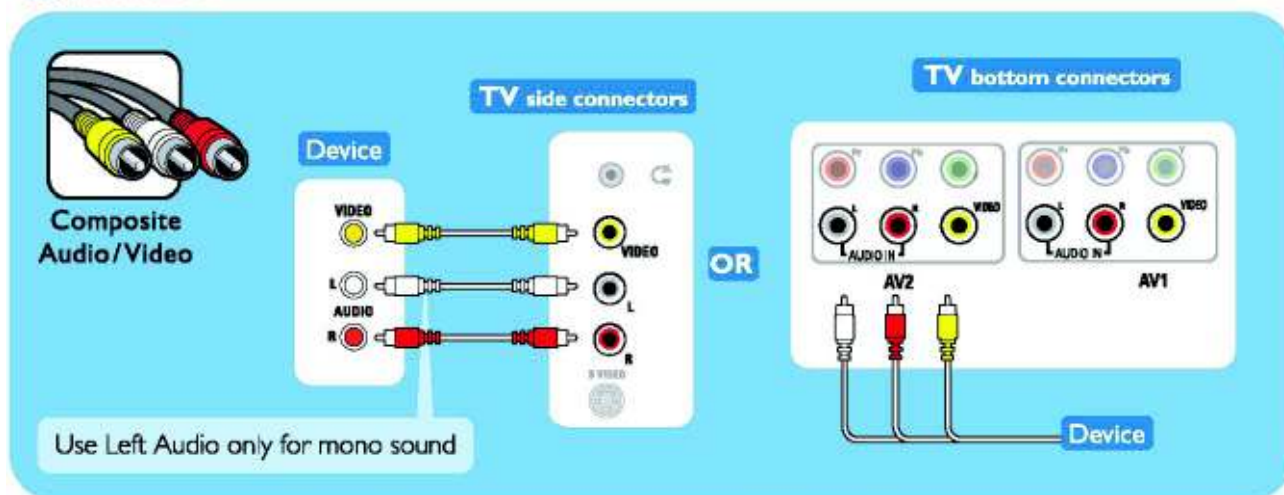
Connecting the PDP

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Connect the Video cable from the Video output on your camera or game console to the video input located on the side of TV.

Connect the Audio L & R cables for sound.



Other possible connections



Component Video Input
See DVD Recorder



S-Video
See VCR

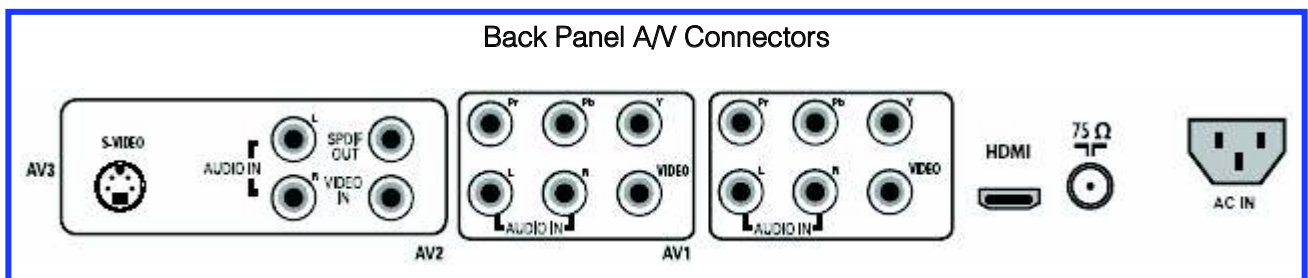
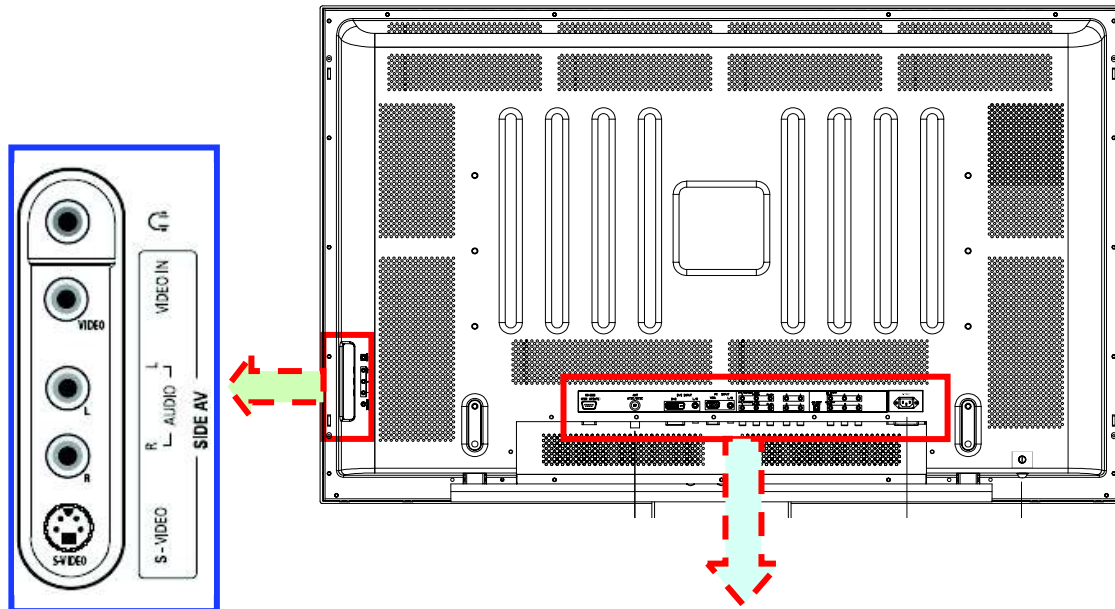
Weak channel installation

Antenna reception for broadcast channels may vary. If you are having difficulties acquiring weaker signals, we suggest you see: Weak Signal Installation feature. Here's how:

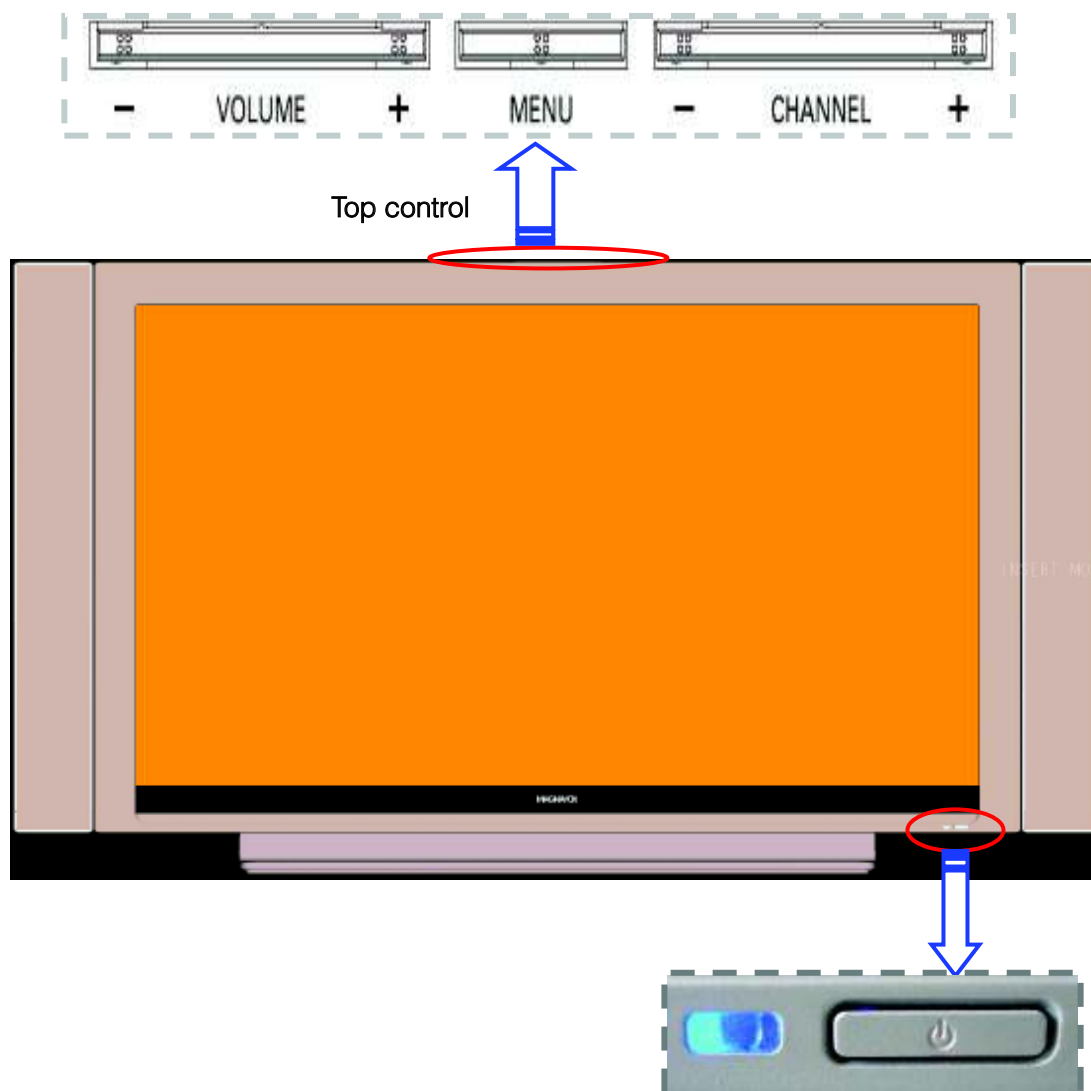
1. In the antenna mode, select a channel from the displayed list of TV channels.
Select the "start" by red button on the remote control, TV set will detect the signal.
2. The signal strength is continuously displayed and updated as the antenna rotates.
When strength is enough to identify, user can store the channel in the channel list by green button on the remote control.

For detail information please refer to user's manual.

Most of these interfaces are located at the back-panel. There's also a group of connectors located on the side of this device for easier access. The following figures depict these A/V connectors.



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Key	PC mode	TV/video mode
"-" (Volume)	Decrease/Volume down	Decrease/Volume down
"+" (Volume)	Increase/Volume up	Increase/Volume up
Menu	Enter /Exit OSD menu	Enter /Exit OSD menu
"-" (Channel)	Menu Select Down	Menu Select Down/Channel Down
"+"(Channel)	Menu Select Up	Menu Select Up/Channel up

- Access main menu by pressing "MENU" key.
- Select function via Channel "+" / - " keys, increase/decrease via Volume "+" / - " keys.
- Volume "+" / - " are also for Volume Hot Key (both TV and PC modes).

0~9 Number keys:

1. Press number button to direct access to TV channel.
2. Press the pass code to activate the factory mode.
3. Press to activate the Channel Lock.

VOL+/-:

Press to adjust the volume.

Arrow keys:

1. Press button to navigate OSD menu.
2. Cursor right key perform confirmation and proceeds next level of OSD.
3. Can use cursor left to return previous level

OK key:

1. Press button to activate the setting/selection of OSD.
2. Press to return previous level.
3. Press to summon channel list.

MUTE:

Mute sound or restore it.

INFO:

1. Press to display information about the selected TV channel (Channel number, format, signal (Sound mode), Mode (Virtual Dolby surround), CC, Analog Lang, Rating, Sleep timer.
2. Press to proceed command for function, which require press in red.

VIEW:

1. Press to summon the favorite channel list.
2. Press to proceed command for function, which requires press in Green.

SOUND:

Press repeatedly to call for the smart sound setting.

POWER:

Press to turn on/off the TV from or to standby mode.

A/CH:

Press to alternate between the currently viewed channel and previously viewed channel. (It should return to previous view if it comes from different signal

AV:

1. Press repeatedly to select the signal source: [AV1/AV2/AV3/HDMI/Side](#).
2. The Source List should be activated and show on OSD.

CH+/-:

1. Press to browse channels
2. Press to turn on TV from stand by mode
3. The channel number should appear on the set.

MENU:

1. Press to activate OSD menu and back to previous level of OSD.
2. Exit OSD.

FORMAT:

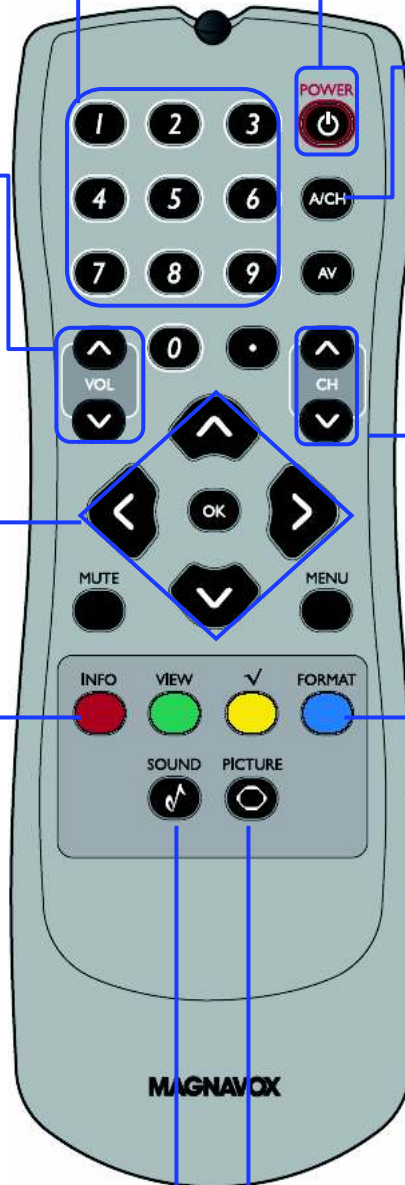
1. Press to toggle among screen Automatic / Super Room / 4:3 / Movie expand. 14:9 / Movie expand 16:9 / 16: 9 subtitle / widescreen
2. Press to proceed command for function, which require pressing blue.

✓ Check Mark:

1. Press to add or remove a channel in favorite list.
2. Press to proceed command for function, which requires press in yellow.

PICTURE:

Press repeatedly to call for the smart picture setting.



OSD Tree

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OSD Layer 1	2	3	4
TV	Picture	Smart picture	Personal→Rich→Natural →Soft→Multimedia→ECO
		Contrast	
		Brightness	
		Color	
		Sharpness	
		Color temperature	Normal→Warm→Cool
		Tint	Slider
		Picture format	Automatic→Super zoom→4:3→Movie expand 14:9→Movie expand 16:9→16:9 subtitle→Wide screen
	Sound	Smart sound	Personal→Speech→Music→Movies→Multimedia
		Volume	
		Balance	
		Headphone volume	
		Sound mode	Stereo→Virtual Dolby Surround
		Alternate audio	Main→SAP
		Digital audio language	English→French (Canadian) →Spanish
		Mono/Stereo	Stereo→ Mono
		AVL	Off→ On
		Delta volume	
	Features	Closed captions	
		Sleep timer	
	Channels	Lock after	
		Channel lock	
		TV ratings lock	
		Movie ratings lock	
		Preferred channels	

Layer 1	2	3	4	5	
S E T U P	Preferences	Sound preferences	Auto surround	Off→On	
		Features preferences	Caption service	CC-1~4→T-1~4	
			Digital caption service	CS-1~6	
			Digital caption options	Reset to default	Reset to default
				Size	Default→Small→Standard→Large
				Style	Default→Mono spaced serif→Serif→Mono spaced sans serif→Sans serif→Casual→Cursive→Small caps
				Text	Color
			Opacity		Default→Solid→Transparent→Translucent→Flashing
			Background	Color	Default→Black→White→Red→Green→Blue→Yellow→Magenta→Cyan
				Opacity	Default→Solid→Transparent→Translucent→Flashing
			Menu preferences	OSD	Normal→Min.
		Show emergency alerts		Always→Skip low priority→Skip medium/low	
		Change PIN			
		Reset AV settings	Start now		
	Source	AV1	None →Recorder→DVD→SAT→Game→Digital STB→PVR→HD→Cable→Other		
		AV2			
		AV3			
		HDMI			
		Side	None →Camera→Game→Recorder→Other		
		Analog Audio in	AV1→HDMI		
	Clock	Auto clock mode	Automatic →Manual		
		Auto clock channel			
		Time			
		Day	Sun→Mon→Tue→Wed→Thu→Fri→Sat		
		Time zone	Atlantic→Eastern→Central→Mountain→Pacific→Alaska→Hawaii		
		Daylight saving	Automatic →Off		

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OSD Layer 1	2	3	4
Installation	Language	English→Francais→ Espanol	
	Auto program	Start now	Antenna→Cable
	Weak channel Installation		
	Software upgrade	Current software Info→ Local Upgrades / applications	

OSD MENU Description

The OSD display should ensure that no burn-in or image sticking occurs by having timeout of no more than 10 min. Timeout definition: 10 min. for menu, 30 seconds for OSD icons (i.e. Channel no., mute, info, AV selected), 5 seconds for channel & AV background, view, format, sound, picture, favorite.

How to navigate through the Settings menus

The Settings menu allows you to access and change settings and preferences settings.

Settings	TV
TV	Picture
Setup	Sound
Installation	Features
Exit	Channels
Info	

- Press the **MENU** button on the remote control to display the Settings menu.

- Use cursor up/down to highlight and select a menu item on the left panel.

The right panel shows the content of the menu you have highlighted in the left panel.

Note: Sometimes not all the menu items are visible on the screen. Use cursor down to scroll down to additional items.

- Use the cursor right to enter the right panel.

The content of the right panel is moved to the left panel and the right panel shows the content of the newly highlighted item in the left panel.

Note: In some cases, you will want to watch the picture on your screen while adjusting settings. This means that when the highlight is on the right side panel, the other menu items are hidden. When the cursor left is pressed again, the hidden menu items re-appear and the highlight moves to the left panel.

Settings	Picture
TV	Smart Picture
Picture	Contrast
Sound	Brightness
Features	Color
Channels	Sharpness
	Color temperature
	Tint
	Picture format
Info	

- Press the cursor left to go one menu level up again.

- Press the **OK** button on the highlighted item to activate and to dismiss the menu.

- Press the **MENU** button again to exit the Settings menu.

Note: The menu is also dismissed by pressing one of the color buttons (if present) referring to certain actions which may be executed.

Installation MENU

1. Select the menu language

Settings	Installation
TV	Language
Setup	Autoprogram
Installation	Weak channel installation
Exit	Software upgrade
Info	

- 1) Press the **MENU** button on the remote control.
- 2) Use the cursor down to select **Installation** in the Settings menu.
- 3) Use the cursor right to enter the Installation menu.
- 4) Select **Language** and enter the list of available languages with the cursor right.
- 5) Select your preferred language with the cursor up/down and press the **OK** button to confirm you selection.
- 6) Proceed with the Installation menu.

2. Store TV channels

Settings	
Installation	Autoprogram
Language	
Autoprogram	Start now
Weak channel installation	
Software upgrade	
Info	

- 1) Select **Auto-program** in the Installation menu.
- 2) Use the cursor right to enter the Auto-program menu.
- 3) Press the **OK** button.
- 4) Select **Cable** or **Antenna** in the Installation mode.
When **Antenna** is selected, the TV will detect antenna signals and will search for antenna TV (NTSC and ATSC) channels available in your local area.
When **Cable** is selected, the TV will detect cable company supplied signal sand will search for cable TV (NTSC, ATSC, QAM modulated) channels available in your area.
Make sure that registration with your cable TV provider and connection of equipment are completed.

Television Installation

Installation mode

Antenna

Cable

Please select your installation mode

Previous Next

- 5) Press the green button “**Next**” on the remote control.
Note: All channels must be unlocked in order to auto-program. If requested, enter your PIN code to unlock all channels. See Menu preferences in the Settings, TV menu.
- 6) Press the green button “**Start**” to start auto-programming. The menu screen disappears and the progress of auto-programming is displayed. The progress bar indicates the number of analog and digital TV channels found. When auto-programming is complete, a message appears confirming the completion and the TV switches to the first installed TV channel.

Notes:

- When you have locked TV channels before initiating Autoprogram, a message appears asking to enter your PIN code in order to complete Autoprogramming.
- ATSC channel information is updated automatically when the TV is in standby after 3 minutes and every 3 hours thereafter.
- When channel update is interrupted, the new updated channel information is retained along with the old un-updated channel information.
- Background Autoprogramming occurs only when the TV is turned on.
- Channel information about an ATSC channel is updated only for the ATSC channel currently tuned.
- If an NTSC channel is tuned, then in Background Autoprogramming the TV shall scan all the possible ATSC frequencies and update information.
- Weak channel installation allows you to manually tune weak ATSC channels in order to adjust the antenna and thus optimize signal quality for that channel. (See Installation menu, Weak channel installation)
- Once you have searched for the available Antenna as well as the Cable TV channels, they are stored in the memory.
- If Antenna/cable signal is interrupted more than ten minutes, TV will go into off mode. You are requested to press **Power** button or **CH $\wedge$ /V** button to turn on the TV.

3. Channel turning**Available channels:**

- Cable (analog NTSC or digital QAM)
- Terrestrial (analog NTSC or digital ATSC)

If a tuned channel is not yet in the master channel map, the TV will attempt to tune to the channel and it will be added to the map.

If the channel is not acquired, a message will appear reporting that the channel is not available. When you tune an audio-only digital subchannel, a display appears with the message Audio only.

Note: Subchannel selections

The new standards employed with digital broadcasting make it possible to receive multiple program channels under a single major channel number which can be selected by pressing the digit remote control direct-access channel number entry.

Important:

After the installation of the TV channels is completed, always make a selection in the Installation menu between Antenna or Cable whether you want to watch Antenna TV channels or Cable TV channels. If you make use of a signal splitter do not forget to put the switch in the corresponding position.

Note: Digital Channel selection delay

Due to the tuning complexity of subchannel digital programming, the time to select and view a digital channel may take slightly longer than what the viewer is normally accustomed to (as compared to analog channel programs).

Digital channel broadcasts contain program and system data information that must be processed before the channel selection can be displayed.

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4. Weak channel installation

Antenna reception for broadcast channels may vary. If you are having difficulties acquiring weaker signals, we suggest you use: Weak Signal Installation feature.

Here's how:

- 1) In the antenna mode, select a channel from the displayed list of TV channels. Select the “Start” by red button on the remote control; TV set will detect the signal.
- 2) The signal strength is continuously displayed and updated as the antenna rotates.
When strength is enough to identify, user can store the channel in the channel list by green button on the remote control.

5. Software upgrade

This menu allows you to upgrade your TV software using a USB device.

Settings	Installation
TV	Language
Setup	Autoprogram
Installation	Weak channel installation
Exit	Software upgrade
Info	

USB upgrade

It is possible to initiate an upgrade procedure from a USB portable memory (not supplied). The memory device must be filled with the appropriate upgrade image (and structure) which can be found on the www.usasupport.magnavox.com website. How to upload a new software version on your portable memory device (not supplied), see the chapter of “software upgrade”,

Setup MENU

[illegible]

- This menu is used to control the settings of special TV functions, features and accessory devices.
- The **Preferences menu** allows you to change settings that will typically be accessed only occasionally.
- The **Source** menu allows you to select a source.
- The **Clock** menu allows you to use your TV as a clock. This setup is necessary for the correct working of the **Lock after** feature.

1. Preferences

[illegible]

- 1). Press the **MENU** button.
- 2). Select **Setup** with the cursor down key and press the cursor right key to select the **Preferences** menu.
- 3). Press the cursor right key again to select **Sound preferences**.
- 4). Press the cursor right key once more to enter the Sound preferences menu.

➤ **Sound Preferences**

Sometimes the broadcaster transmits special signals for Surround sound encoded programs. The TV automatically switches to the best surround sound mode when **Auto surround** is switched **On**

Settings	
Preferences	Sound preferences
Sound preferences	Auto surround
Features preferences	
Menu preferences	
Reset AV settings	
Info	

➤ Features Preferences

[illegible]

1). Caption service

This allows you to select the Closed Captions service levels of analog broadcasting to be displayed. Closed Captioning allows you to read the voice content of television programs on the TV screen. Designed to help the hearing impaired, this feature uses on-screen 'text boxes' to show dialogue and conversations while the TV program is in progress.

Captions will appear on the screen during captioned broadcasts.

- ①. Select **Captions service**.
- ②. Press the cursor right key.
- ③. Select the desired Caption service:
 - CC 1,2,3 or 4

Dialogue (and descriptions) for the action on the captioned TV program shows on screen. Usually CC1 is the most used. CC 2 may be used for alternate languages if they are being transmitted.

- T 1,2,3 or 4

Often used for channel guide, schedules, bulletin board information for Closed Captions programs, news, weather informations or stock market reports.

Not all Caption services are necessarily being used by a TV channel during the transmission of a Closed Caption program.

- ④. See Closed Caption in the TV, Features menu, to turn the Caption service On or Off.

Note: The captions do not always use correct spelling and grammar. Not all TV programs and product commercials are made for broadcast with Closed Caption information included. Refer to your area's TV program listings for the TV channels and times of Closed Caption programming. Captioned programs are usually noted in the TV listings with service marks such as 'CC'.

2). Digital caption service

This allows you to configure the way you choose to view digital captioning. Select one of the digital service channels made available by the caption provider.

There are six standard services. Service 1 is designated as the Primary Caption Service. This service contains the verbatim, or near-verbatim captions for the primary language being spoken in the accompanying program audio.

Service 2 is designated as the Secondary Language Service. This service contains captions in a secondary language, which is a translation of the captions in the primary Caption Service. The other service subchannels are not pre-assigned. It is up to the discretion of the individual caption provider to utilize the remaining service channels.

3). Digital caption options

This allows you to modify how digital captions are displayed on your TV. Select from the following options to change the visual characteristics of your TV's digital captioning.

- **Reset to default**

Select this option to reset the digital caption options to the captions provider default settings. Press the **OK** button to confirm.

- **Size**

Select this option to choose a caption display size according to your own preference. Select **Default (Automatic)**, **Small**, **Standard** or **Large** and press the **OK** button to confirm.

- **Style**

Select this option to choose a caption display font style according to your own preference.

Select **Default**, **Mono spaced serif**, **Serif**, **Monospaced sans serif**, **Sans serif**, **Casual**, **Cursive** or **Small caps**.

- **Text**

Select this option to choose caption display text box, text color and/or the opacity according to your own preference. Select a color and an opacity option.

- **Background**

Select this option to choose caption display character back ground color or one of the background opacity options according to your own preference. Select a color and one of the opacity options.

➤ **MENU Preferences**[illegible]

1). OSD

- ①. Select OSD.
- ②. Press the cursor right key to select **Normal** or **Minimum**. **Normal** activates a continuous display of the channel number for a maximum of 10 minutes and extended display of TV channel and program information on screen. For example, information on the main or auxiliary program, input signal quality of connected accessory devices, the display format, sound mode, availability of Closed Caption service, the audio language, the rating, sleep timer setup is displayed. **Minimum** activates the display of reduced channel information.

Note: 1. When Closed Captions is switched on, continuous display of the channel number and clock is not possible.

2. *Emergency Alert Signalling is not possible:*
- *when content browsing;*
 - *with analogue video sources.*

2). Show emergency alerts (EAS)

This allows you to select the alert priority level of the information disseminated by the cable operator. The standard SCTE18 defines an Emergency Alert signalling method for use by cable TV systems to signal emergencies to digital devices such as digital set-top boxes, digital TVs and digital VCRs. The Emergency alert signalling scheme defined in the standard allows a cable operator to disseminate emergency alert information related to state and local-level emergencies and warnings in a cost-effective and efficient way, while minimizing disruption of programming. An Emergency alert message will have one of the following priorities: **Low**, **Medium**, **High** or **Maximum**. The Emergency alert message with priority **High** or **Maximum** will always be presented. **Low** or **Medium** will be present or ignored depending on the setting you select.

Important: When the TV clock is undefined (See Setup menu, Clock), the Emergency Alerts will be ignored.

The Emergency Alert message display will contain following information:

- The Emergency Alert text
 - The start time + date
 - The end time + date.
- ①. Select **Show Emergency Alerts** in the Menu preferences menu.
 - ②. Press the cursor right key and select one of the Emergency alerts options:
 - Always: You always want available Emergency alert messages to be displayed;
 - Skip low priority: You want low level messages to be ignored;
 - Skip low/medium priority: You only want the high priority message to be displayed.

Notes:

- *You always have the possibility to remove the message from the screen.*
- *The message display will overlap whatever menu element or other message is on the screen.*

3). Set/Change PIN

- ①. Select **Set** or **Change PIN** with the cursor down.
- ②. If no PIN-code exists, the menu item is set to **Set PIN**.
Follow the instructions on screen. If a PIN-code has previously been entered, the menu item is set to **Change PIN**. Follow the instructions on screen. All number combinations from 0000 to 9999 are valid numbers.
- ③. The **Menu preferences menu** reappears with a message confirming that the PIN has been created.

Important: you have forgotten your PIN!

- ①. *Select Change PIN in the Menu preferences menu and press the cursor right key.*
- ②. *Press the cursor right key to enter the overriding PIN code 0-7-1-1.*
- ③. *Press the cursor again and enter a new personal 4-digit PIN code. The previous code is erased and your new PIN-code is stored.*

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➤ Reset AV settings

Settings	
Preferences	Reset AV settings
Sound preferences	Start now
Features preferences	
Menu preferences	
Reset AV settings	
Info	

This function allows you to reset most of the picture and sound settings to their default factory levels.

- ①. Select **Reset AV settings** with the cursor down key.
- ②. Press the cursor right key.
- ③. Press the **OK** button to erase settings and reset them to their default values.

2. Source

This menu allows you to identify the accessory devices you have connected to the external inputs /outputs.

Settings	
Setup	Source
Preferences	AV1
Source	AV2
Clock	AV3
	HDMI
	Side
	Analog Audio In
Info	

➤ Source(AV1,AV2,AV3,HDMI,Side)

- ①. Select **Source** in the Setup menu.
- ②. Press the cursor right to enter the list of types of devices connected to the selected input.
- ③. Select the accessory device with the cursor up/down.

When you select AV1, AV2, AV3, HDMI1, Side or Analog Audio In, a list appears allowing you to identify which type of accessory device is attached to this input. The TV detects the presence of the connected device and the signal is routed appropriately.

➤ Analog Audio In

If your accessory device has a DVI output connector, only the video signal is transmitted in digital format. To input an audio signal, please connect the analog audio L and R outputs to the TV's L and R AV1 audio input plugs. To activate the audio function, select HDMI from the Analog Audio In menu to activate.

➤ **Digital Audio Out**

In addition to accepting audio input through **HDMI**, the TV can output Digital audio through the **DIGITAL AUDIO OUT (SPDIF OUT)** connector to an external amplifier or receiver. If your amplifier or receiver has a matching connector for Digital Audio In, you can connect it with a single cable to the TV's DIGITAL AUDIO OUT (SPDIF OUT).

3. Clock

This allows you to use your TV as a clock.

Note: Adjusting the clock is necessary for the correct operation of Lock after (See TV settings, Channels) features.

Settings	
Setup	Clock
Preferences	Auto clock mode
Source	Auto clock channel
Clock	Time
	Day
	Time zone
	Daylight saving
Info	

Most TV channels do not transmit clock information. A few cable channels do, but they are at the end of the channel ring. Antenna channels do not transmit clock information. If clock information does not appear, you can assume that either clock extraction is taking a long time or that there is no clock.

➤ **Auto clock mode**

- ①. Select **Clock** in the Setup menu.
- ②. Press the cursor right key to select the **Auto clock mode**.
- ③. Press the cursor right key to instruct the TV to get the time automatically or manually.

➤ **Auto clock channel** *(only available when Auto clock mode is set to Automatic)*

With the cursor buttons, select the channel number where time can be found by the TV. Typically time can be found on PBS as well as some other channels.

Note: If Manual has been selected in the Auto clock mode, the Auto clock channel menu item can not be selected.

➤ **Time - Day** *(only available when Auto clock mode is set to Manual)*

With the cursor buttons, select and enter the correct time and day. If **Auto clock mode Manual** has been selected, and no clock search has been done, the system will keep the entered time and day.

➤ **Time Zone** *(only available when Auto clock mode is set to Automatic)*

- ①. This function allows you to select your local time zone.
- ②. Broadcasted time information will correct the clock display for your local time.
Select **Time zone** with the cursor down.
Press the cursor right to select your local time zone.

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➤ **Daylight saving** (only available when Auto clock mode is set to Automatic)

Daylight saving time is automatically set by specially broadcasted signals. This menu item allows you to disable the automatic setting of daylight saving time. This is useful if you live in an area or state where daylight saving is not applied, but you receive channels from other areas where daylight saving signals are broadcasted.

- ①. Select **Daylight saving** with the cursor down.
- ②. Press the cursor right key to select **Automatic** for automatic clock correction for daylight saving time, based on specially broadcasted signals.
- ③. Select **Off** to disable automatic clock correction based on the specially broadcasted signals.

TV MENU

Press the **MENU** button on the remote control to display the Settings menu. The TV menu gives you an overview of the menus you can select.

Settings	TV
TV	Picture
Setup	Sound
Installation	Features
Exit	Channels
Info	

Note: Depending on the input signal, one or more menu items may not be selectable.

1. Picture

Note: Some menu items are not available in case of HD sources.

Settings	
TV	Picture
Picture	Smart Picture
Sound	Contrast
Features	Brightness
Channels	Color
	Sharpness
	Color temperature
	Tint
	Picture format
Info	

- ①. Press the cursor right key to select **Picture**.
- ②. Press the cursor right key again to enter the Picture menu.
- ③. Select the menu items with the cursor up/down key.
- ④. Adjust the settings with the cursor left/right key or enter the list of submenu items with the cursor right key. Select a submenu item with the cursor up/down key.

➤ Smart Picture

- ①. Select **Smart picture** to display a list of predefined picture settings, each corresponding with specific factory settings. **Personal** refers to the personal preference settings of picture in the picture menu.

*Note: This Magnavox TV has been set at the factory to look best in bright store environments, which typically use fluorescent lighting. As your home will likely not be as well lit as a store, we recommend that you cycle through the various smart picture modes to find the one that best suits your own viewing conditions. Most consumers will find that **Natural** is the correct choice.*

- ②. You can press the **Smart picture** button repeatedly to select either Personal, Rich, Natural, Soft, Multimedia or Eco picture settings.

*Note: When you watch programs using VCR, it's recommended to select **Soft** Mode via smart picture.*

➤ Contrast

This will adjust the intensity of bright parts in the picture but keep the dark parts unchanged.

➤ Brightness

This will adjust the light output of the complete picture, which will mainly affect the darker areas of the picture.

➤ Color

This will adjust the saturation level of the colors to suit your personal preference.

➤ Sharpness

This will adjust the sharpness of fine details in the picture.

➤ Color temperature

This will increase or decrease **Warm** (red) and **Cool** (blue) colors to suit personal preferences.

Select **Cool** to give the white colors a blue tint, **Normal** to give the white colors a neutral tint, **Warm** to give the white colors a red tint.

➤ Tint

Allows you to select the picture 's color mix or hue.

➤ Picture format

This menu item performs the same as the FORMAT button on the remote control.

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2. Sound

Settings	
TV	Sound
Picture	Smart Sound
Sound	Volume
Features	Balance
Channels	Headphone volume
	Sound mode
	Alternate audio
	Digital audio language
	Mono/Stereo
Info	

- ①. Select Sound in the TV Settings menu.
- ②. Press the cursor right key to enter the sound menu.
- ③. Select the menu items with the cursor up/down key and adjust the settings with the cursor left/right key.
- ④. Remember, control settings are at normal mid-range levels when the bar scale is entered.

➤ Smart sound

Select Smart sound to display a list of predefined sound settings, each corresponding with specific factory settings of Treble and Bass. Press the cursor right key to enter the list.

- ①. Press the cursor up/down key to select a predefined sound setting.
- ②. Personal refers to the personal preference sound settings in the sound menu.

Note: The moment you are in a predefined Smart sound setting and you modify a setting in the Sound menu, all values of the menu will overwrite the previously made personal setting.

➤ Volume

This will adjust the sound output level.

➤ Balance

This will adjust the output of the right and left speakers to obtain the best stereo reproduction for your listening position.

➤ Headphone volume

This controls the level of sound through the headphones.

➤ Sound mode

This select the modes for more spatial or surround sound reproduction dependent on the broadcast signals or signals from external inputs received.

➤ Alternate audio (only selectable with analog broadcast signals)

This gives you the possibility to swap between the Main and Second Audio Program (SAP) when it is available.

➤ **Digital audio language** (only selectable with digital broadcast signals)

Selects your language preference when digital broadcast signal multilingual audio track programs are available.

Note: The default language for the digital channels is the installed menu language.

➤ **Mono/Stereo**

Selects per TV channel, Mono or Stereo sound when analog stereo broadcasts are available.

➤ **AVL(Automatic Volume Leveler)** (only available with analog broadcast and non-Digital signals)

Automatically reduces the volume differences between channels and programs, providing a more constant overall level. This will also reduce the dynamics of sound.

➤ **Delta volume**

Corrects for any permanent volume differences between TV channels or external sources.

3. Features

Settings	
TV	Features
Picture	Closed captions
Sound	Sleeptimer
Features	
Channels	
Info	

- ①. Select **Features** in the TV Settings menu. Press the cursor right key to enter the features menu.
- ②. Select the menu items with the cursor up/down key and adjust the settings with the cursor left/right key.

➤ **Closed captions**

This displays the transmitted CC- or CS-text on the screen according to your chosen CC or CS service in the Setup menu, Features preferences menu. This text can either be permanently displayed (assuming that the service is available in the broadcast) or only when mute is active.

- ①. Press the cursor right key after having selected Closed captions.
- ②. Select On, Off or On during mute.

➤ **Sleeptimer**

This sets a time period after which the TV automatically turns to standby.

- ①. Select **Sleeptimer**.
- ②. Press the cursor right key.
- ③. Select a value with the cursor up/down key. The list will have values from Off to 180 minutes. When **Off** is selected, the sleeptimer is turned off.
You can always turn off your TV earlier or select another time set.

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4. Channels

This menu can control special functions for the TV channels.

Settings	
TV	Channels
Picture	Lock after
Sound	Channel lock
Features	TV ratings lock
Channels	Movie ratings lock
	Prefered channels
	Region ratings lock
	Clear region ratings
Info	

- ①. Select **Channels** in the TV settings menu with the cursor up/down key.
- ②. Press the cursor right to enter the channels menu.
- ③. Press the cursor up/down key to select a channels menu item.

➤ Lock after

Note: Lock after is only selectable if time and date are known. See Setup, Clock menu.

This allows you to prevent the viewing of the channels after a selectable time delay. Locked channels can still be tuned, but the picture is blanked and the audio is muted.

Settings/TV	
Channels	Lock after
Lock after	Timer
Channel lock	Time
TV ratings lock	
Movie ratings lock	
Prefered channels	
Region ratings lock	
Clear region ratings	
Info	

- ①. Press the cursor right and select **Timer On** or **Off**.
When set to **On** this allows you to set the clock.
When having selected **Timer On**, you will be asked to enter your PIN (See Set/Change PIN). Follow the instructions on screen.
- ②. Select **Time** and press the cursor right. This allows you to set the time after which the lock is set.
- ③. Select **AM** or **PM** to select the correct period of the day.
- ④. Enter the time with the digit or the cursor buttons and press **OK** to confirm.

➤ Channel lock

This allows you to completely lock a certain TV channel or external source. Select the channels or subchannels you want to lock and press **OK** to confirm.

➤ **TV ratings lock**

Your TV is equipped with a V-chip. This allows you to control access to individual programs based on their movie and TV ratings. All settings apply to all AV inputs, except HDMI. The program content advisory data are sent by the broadcaster or program provider.

- ①. Select **TV ratings** lock with the cursor down. A list appears, showing the age-based TV ratings and a corresponding content-based ratings list.
- ②. Press the cursor right to enter the list.
- ③. Select an age-based TV rating with the cursor up/down, and enter, if present, the list with content-based ratings with the cursor right, and select one content-based rating.
- ④. Press **OK** to activate/de-activate the selected rating. You are asked to enter your PIN-code (see Set/Change PIN, p. 18). If the code is correct, the TV ratings lock menu reappears.
- ⑤. Select another content-based rating if you like and press **OK** again.

You need only enter your PIN-code once while the menu is active. You can lock/unlock any number of ratings on the list without re-entering your code.

Each ratings item has a box-graphic in front of it to indicate whether or not programs carrying that rating are currently locked:

- ☒: all items in the contents-based list are locked as well;
☐: the item is unselected;
☒: some content-based ratings are selected/unselected.

When **All** has been selected, all items in the age-based and in the contents-based lists are locked. If, while **All** is selected, any other item, either an age-based or content-based item, is unselected, then All is automatically unselected.

None is the selection for items that either have rating information or have a rating of **None**. Both will be locked. When an item on the age-based list is selected, all items below that item of the same group are locked as well. When you select a content-based rating, all identical content-based ratings in the younger age-based categories are also selected.

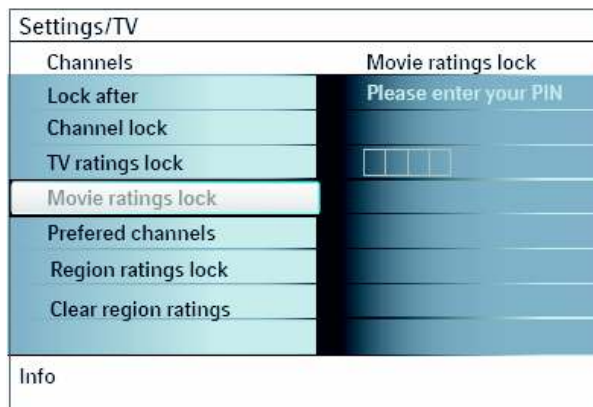
Age-based Rating	Content-based Rating
All	none
None	none
TV-Y	none
TV-Y7	(FV) Fantasy Violence
TV-G	none
TV-PG	(D) Dialog (L) Language (S) Sex (V) Violence
TV-14	(D) Dialog (L) Language (S) Sex (V) Violence
TV-MA	(D) Dialog (L) Language (S) Sex

no

TV-Y	appropriate for children of all ages with themes and elements suitable for children aged 2-6
TV-Y7	programs designed for children age 7 and older
TV-Y7-FV	programs include fantasy violence more intense than other programs in the TV-Y7 category
TV-G	programs suitable for all ages. These programs contain little or no violence, no strong language and little or no sexual dialogue or situations
TV-PG	programs contain elements that some parents may find unsuitable for younger children and which may need parental guidance. The program may contain moderate violence, sexual dialogue and/or situations and some strong language.
TV-14	programs contain elements that may not be suitable for children under 14 years of age. These programs include one or more of the following: intense violence, intense sexual situations, suggestive dialogue and strong language.
TV-MA	programs are designed to be viewed by adults and may be unsuitable for children under the age of 17. These programs may contain graphic violence, explicit sexual activity and/or crude or indecent language.

➤ Movie ratings lock

This function allows you to control access to individual movies based on their MPAA ratings (Motion Picture Association of America).



- ①. Select Movie ratings lock with the cursor down. A list appears, showing all valid MPAA content ratings.
- ②. Press the cursor right to enter the list. You are asked to enter your code. (See Set/Change PIN) If the code is correct, the Movie ratings lock menu reappears.
- ③. Select a movie rating with the cursor up/down.
- ④. Press OK to activate/de-activate the selected rating.

Each rating item has a box-graphic in front of it to indicate whether or not programs carrying that rating are currently locked:

- ☒: movies with this rating are locked;
- ☐: movies with this rating are unlocked.

When **All** has been selected, all items on the movie ratings list become selected. (**All** movies are locked.) If, while **All** is selected, any other item is unselected, then **All** is automatically unselected.

When **NR** has been selected, no other item is selected.

When any other item has been selected, all ratings below are selected as well, thus all movies with those ratings will be locked.

NR	not rated
G	movies with a mild content, suitable for all ages
PG	movies for which parental guidance is recommended. They may contain a few racy or violent scenes or maybe some bad language
PG-13R	movies for which parental guidance may be recommended if under age 13
R	restricted. The movies usually contain offensive sex or bad language and may be unsuitable for children under the age of 17. Parental guidance or permission needed.
NC-17	even with parental permission, forbidden under age 17. More offensive sex, violence or bad language.
X	movies which generally focus on sex, violence and/or bad language. Also known as pornography.

➤ Preferred channels

A channel, when installed, is marked as preferred by default and added to the channel list. This feature provides the ability to remove a channel number from the channel list.

Settings/TV	
Channels	Preferred channels
Lock after	Channel 1
Channel lock	Channel 2
TV ratings lock	*****
Movie ratings lock	
Preferred channels	
Region ratings lock	
Clear region ratings	
Info	

- ①. Select **Preferred channels** with the cursor down key.
- ②. Press the cursor right key to enter a list with all stored channel numbers.
- ③. Select the channel you want to remove with the cursor down key.
- ④. Press **OK**.
- ⑤. Repeat to remove other channels.

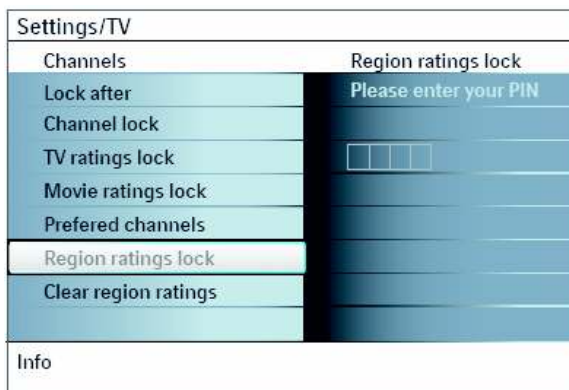
Note:

Region ratings lock: This allows you to control access to individual programs base on their broadcasted regional rating. Clear region ratings: This allows you to clear all the locks that you have set in the Region ratings lock table.

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➤ Region ratings lock

This allows you to control access to individual programs base on their broadcasted regional rating.



- ①. Select **Region ratings lock** with the cursor down. A list appears, showing the age-based Region ratings and a corresponding contentbased ratings list.
- ②. Press the cursor right to enter the list.
- ③. Select an age-based Region rating with the cursor up/down, and enter, if present, the list with content-based ratings with the cursor right, and select one content-based rating.
- ④. Press **OK** to activate/de-activate the selected rating. You are asked to enter your PIN-code (see Set/Change PIN, p. 17). If the code is correct, the Region ratings lock menu reappears.
- ⑤. Select another content-based rating if you like and press **OK** again.

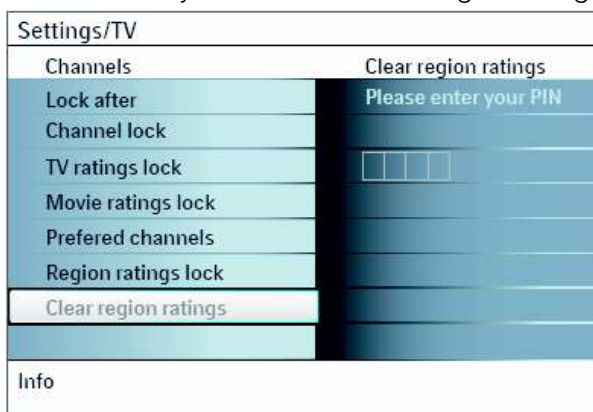
You need only enter your PIN-code once while the menu is active. You can lock/unlock any number of ratings on the list without re-entering your code.

Each ratings item has a box-graphic in front of it to indicate whether or not programs carrying that rating are currently locked:

- ☒: all items in the contents-based list are locked as well;
- ☐: the item is unselected;
- ☒: some content-based ratings are selected/unselected.

➤ Clear region ratings

This allows you to clear all the locks that you have set in the Region ratings lock table.



- ①. Select **Clear region ratings** with the cursor down.
- ②. Enter your PIN-code to clear all region ratings' status.

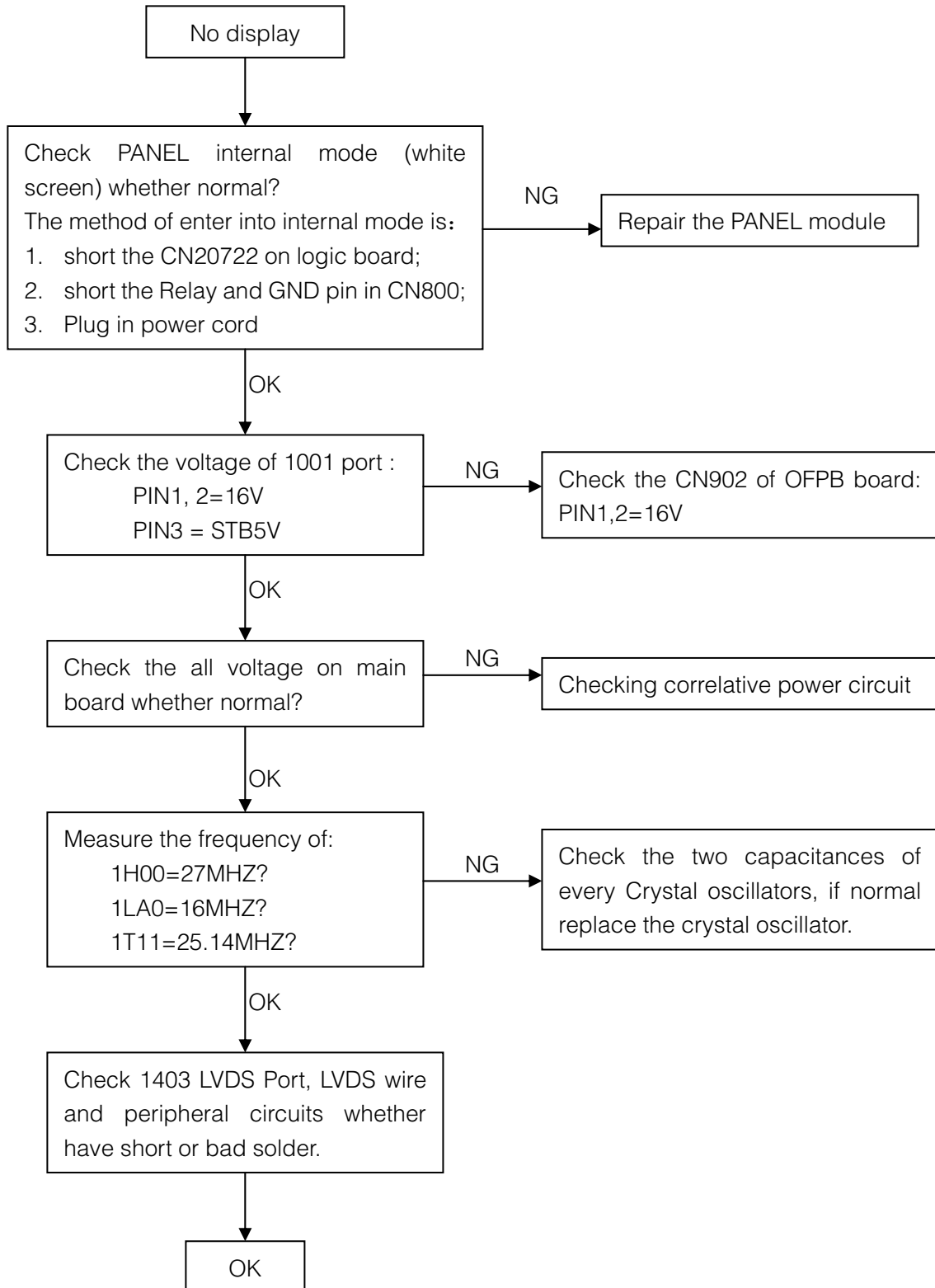
Symptoms	Items to Check and Actions to follow
"Ghost" or double images	● This may be caused by obstruction to the antenna due to high rise buildings or hills. Using a highly directional antenna may improve the picture.
No power	● Check that the TV's AC power cord is plugged into the mains socket. ● Unplug the television, wait for 60 seconds. Then re-insert plug into the mains socket and turn on the television again.
No picture	● Check antenna connections at the bottom of the TV to see if they are properly connected to the TV. ● Possible broadcast station trouble. Try another channel. ● Adjust the contrast and brightness settings. Try another auto picture setting. ● Check the Closed Captions control. Some TEXT modes could block the screen. ● Check if you selected the correct AV source.
No picture And power switched on	● Your TV has a protective mode in case there is too much heat build-up. Check the clearance around the vents of the device to be certain there are no blocking walls or cabinets which would limit the air flow.
Picture position adjustment	When displaying a High Definition signal from the YPbPr inputs or HDMI input, if necessary, you can adjust the picture position to the center of the screen with the cursor left/right or up/down buttons on the remote control. This may be needed due to slight differences in output signals from different brands and types of HD sources boxes. <i>Notes: Most High Definition receiver boxes also have picture-positioning controls in their menu systems. If the TV cursor controls run out of range before the picture is correctly positioned, the receiver box controls will need to be adjusted.</i>
No photo, music or video play or in poor quality only	● Check if the source complies with a supported code.
No sound	● Increase the VOLUME. ● Check that the TV is not muted, press the MUTE button on the remote control. ● When no signal is detected, the TV automatically switches off the sound. This is proper operation and does not indicate a malfunction.
Good sound but poor color or no picture	● Adjust the contrast, color, tint and brightness setting. Try another auto picture setting.
Snowish picture and noise	● Check the antenna connection.
Television not responding to remote control	● Check whether the batteries are working. Replace if necessary. ● Clean the remote control sensor lens on the monitor. ● Operating range between TV and the remote control should not be more than approximately twenty feet. ● You can still use the buttons on the right side of your TV. ● Check if the remote control is in the correct mode.

Trouble shooting

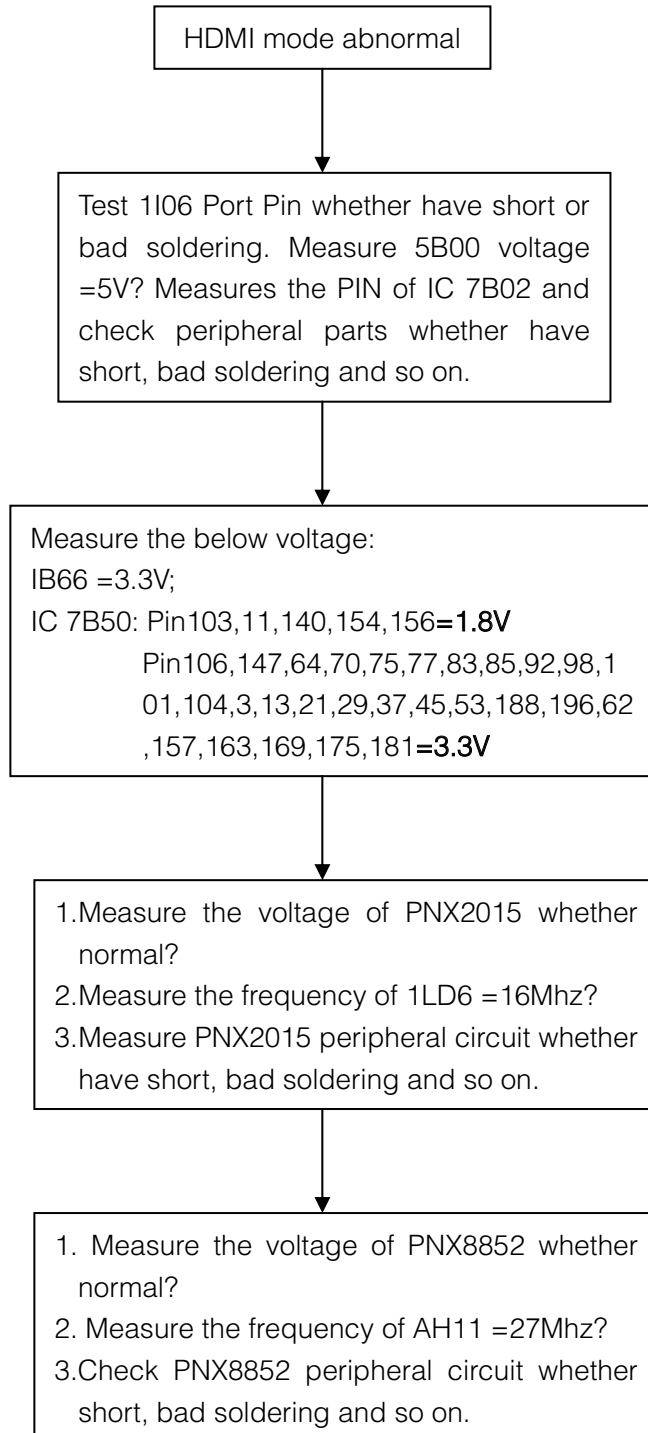
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Control of accessory devices	The infrared signals of the screen may influence the reception sensibility of other peripherals Solution: replace the batteries of the remote control of other devices. E.g. keep away a wireless headphone from within a radius of approximately four feet.
The software will not install	Possibly the operating system is wrong. Go to www.usasupport.magnavox.com to see which operating systems are supported.
After-images appear 	Do not allow a still picture to be displayed for an extended period, as this can cause a permanent after-image to remain on the Plasma TV. Examples of still pictures include logos, video games, computer images, and Teletext. Note: The permanent after-image on the Plasma TV resulting from fixed image use is not an operating defect and as such is not covered by the Warranty. This product is not designed to display fixed images for extended periods of time.

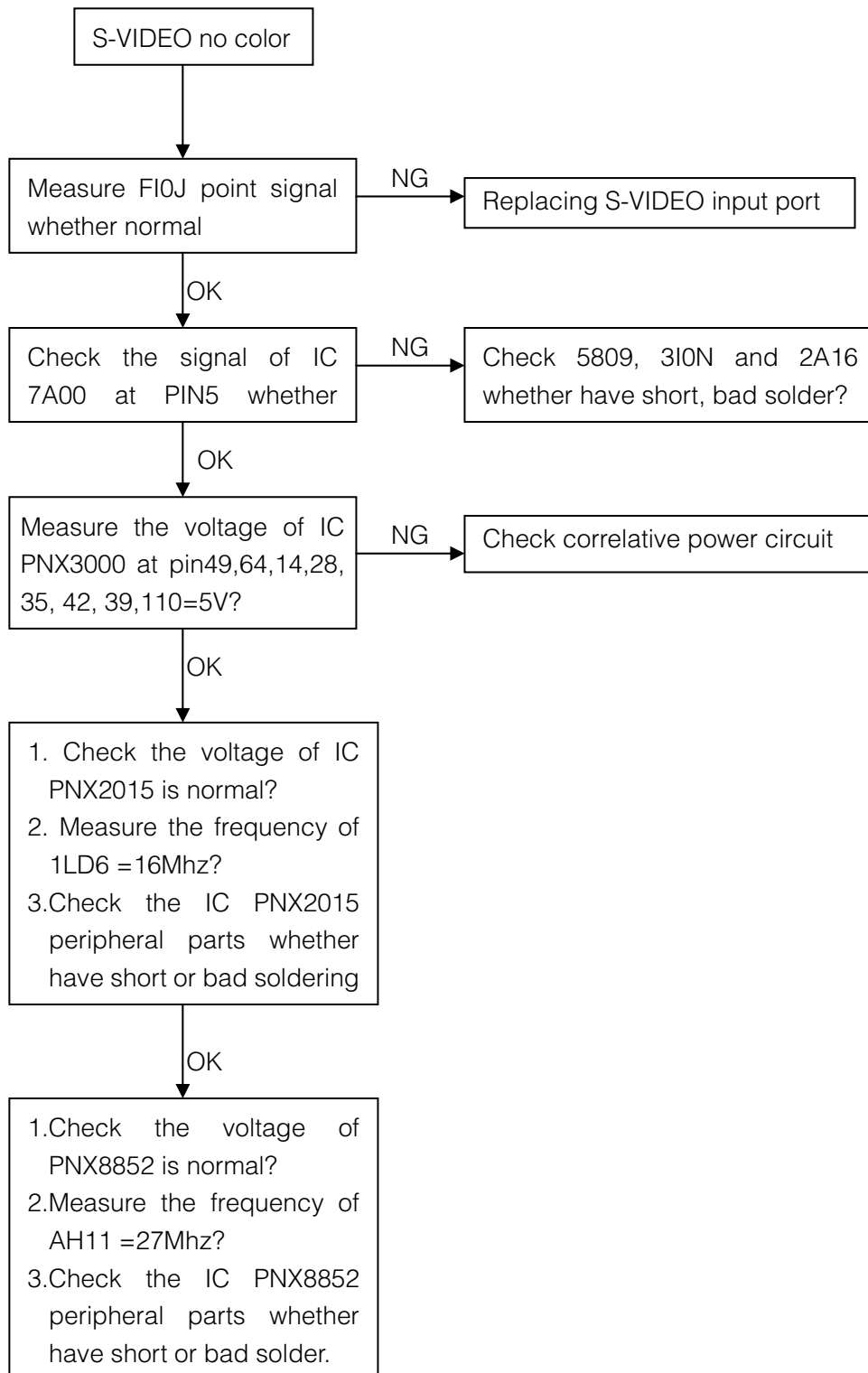
No display



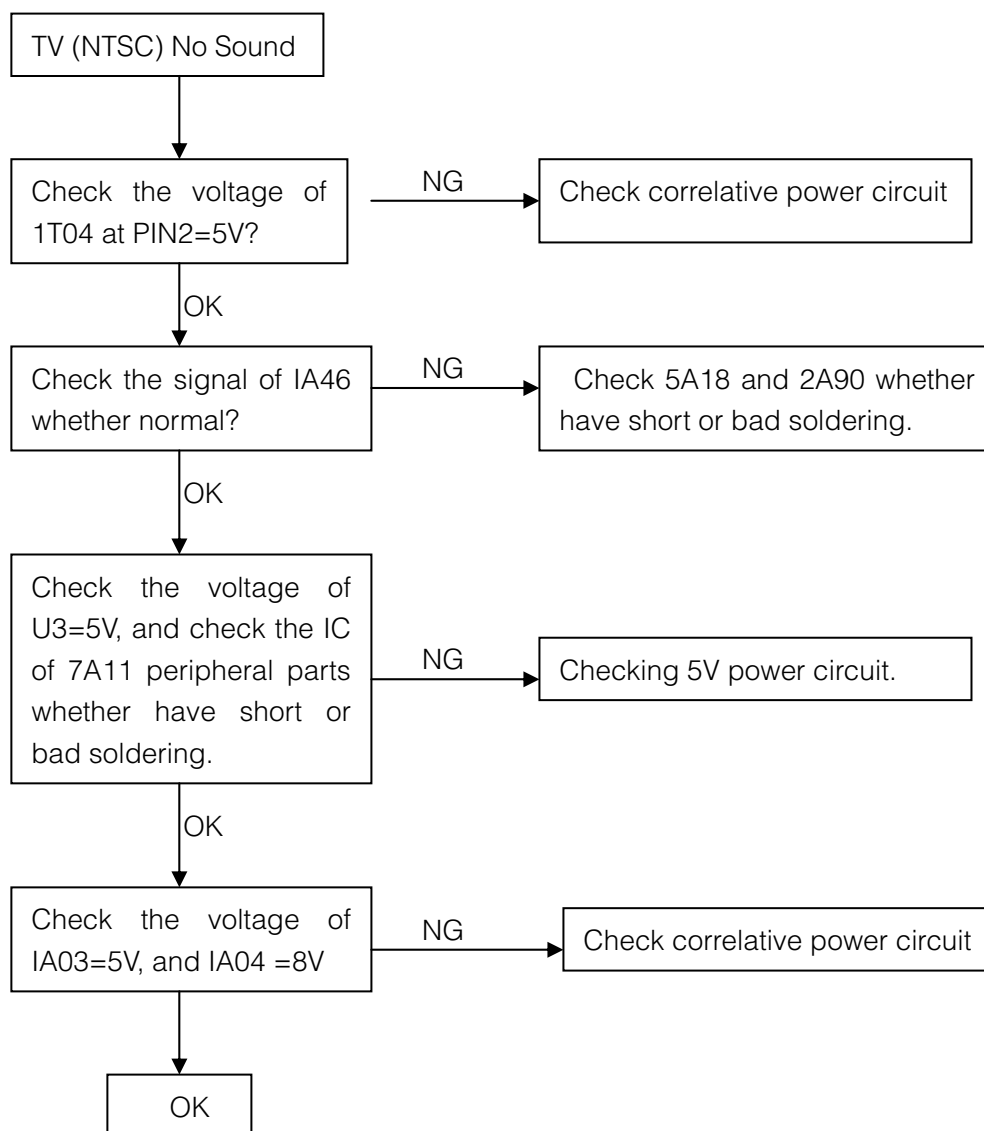
HDMI block



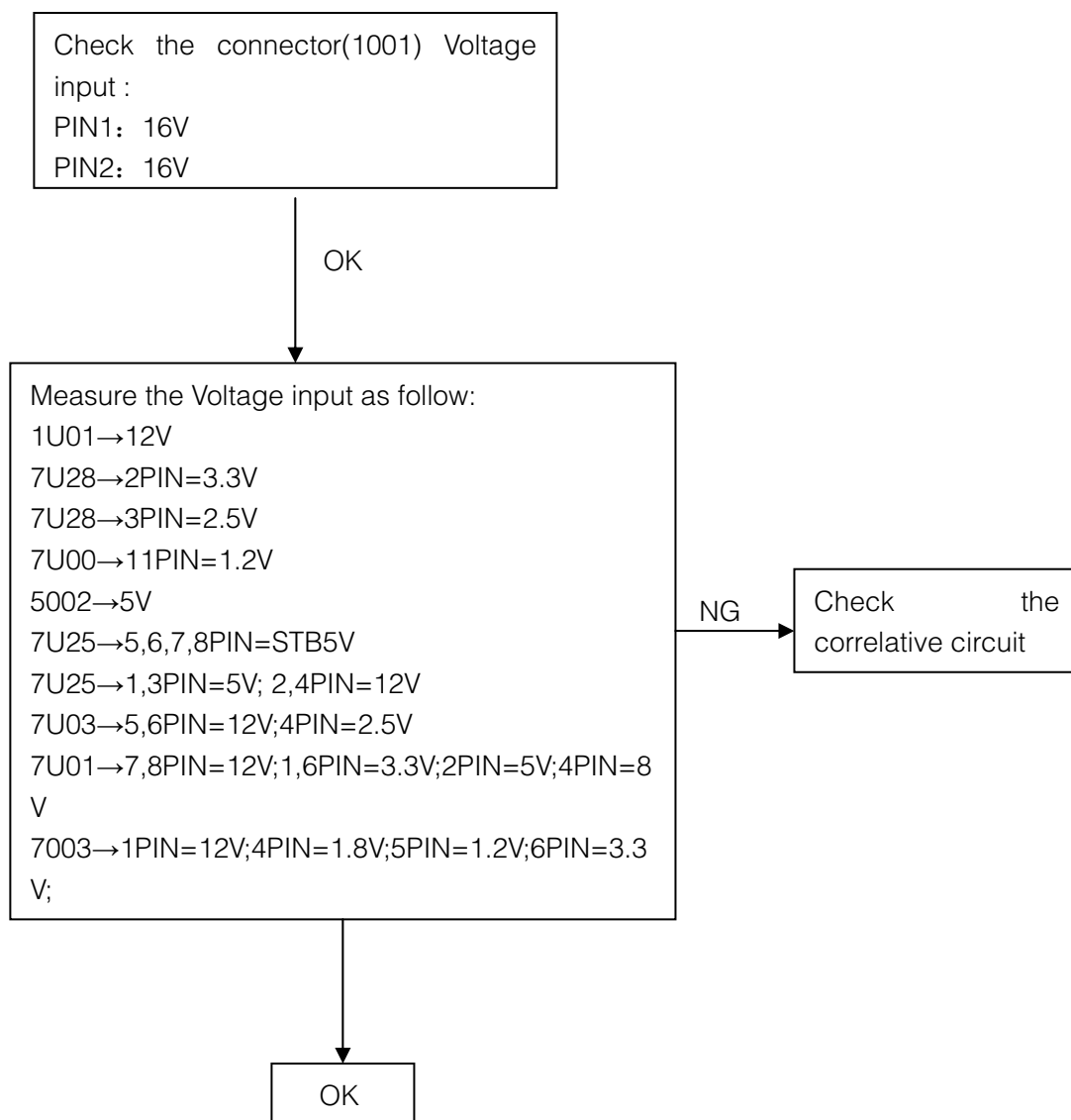
Video block



TV block



DC power block



White-Balance adjustment

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In case the white-balance data memory IC or main EEPROM which storage all factory settings were replaced due to a defect, the data have to be re-adjust.

It is advised to re-soldered DDC IC and main EEPROM from the old board onto the new board if circuit board have been replaced, in this case the white-balance data does not need to be re-adjust.

Equipments list

Chroma7100	1set
Fluck54200 video signal generator	1set
RF cable	1pcs

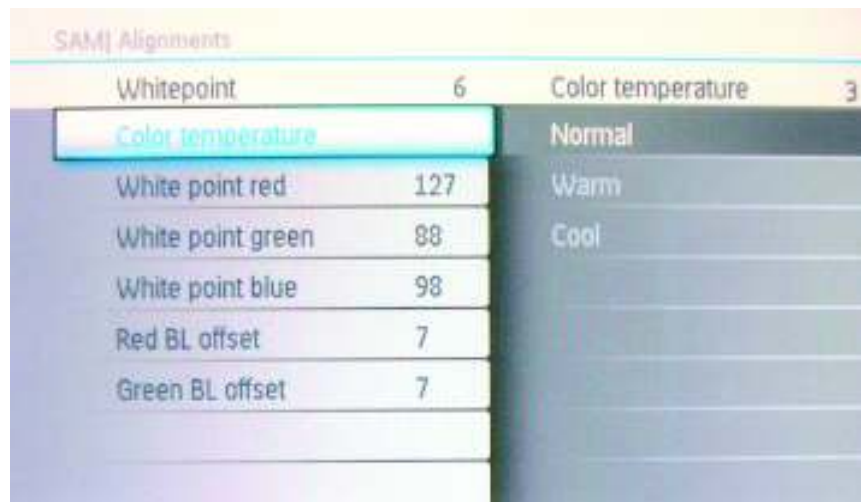
Preparation and Adjustment process

1. Preparation:

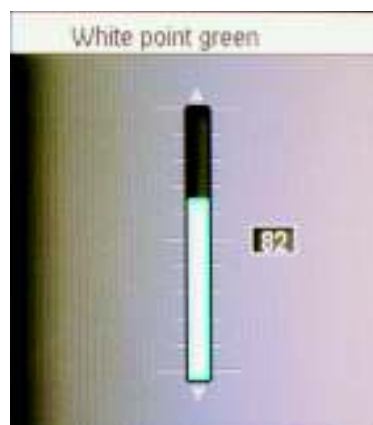
- Connect rear RF port of PDP with Fluck54200.
- The setting of Fluck54200 is 187.25Mhz(80db, White pattern).
- Turn power of PDP and test instrument on.
- Before open lens, Press O-CAL of Chrom-7100 and revise lens.

2. Adjustment process

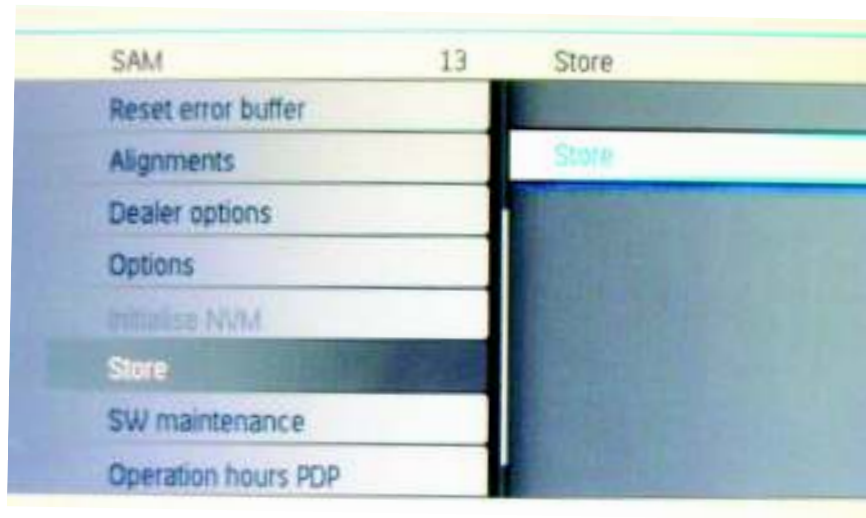
- a). Press the "062596" and INFO key(Red key) with IR Remoter in TV mode, there is a warning OSD displayed.
- b). In the factory menu, select "Alignments -> Whitepoint"



- c). There are "Color temperature", "White point red", "White point green", "White point blue", "Red BL offset" and "Green BL offset" items which can be adjusted.



- d). After adjust the items, go back to the factory main menu, press DOWN to next page, and select "Store", press "OK" key, then the OSD will show "store completed".



- e). Reboot the TV set, the white balance setting is changed.

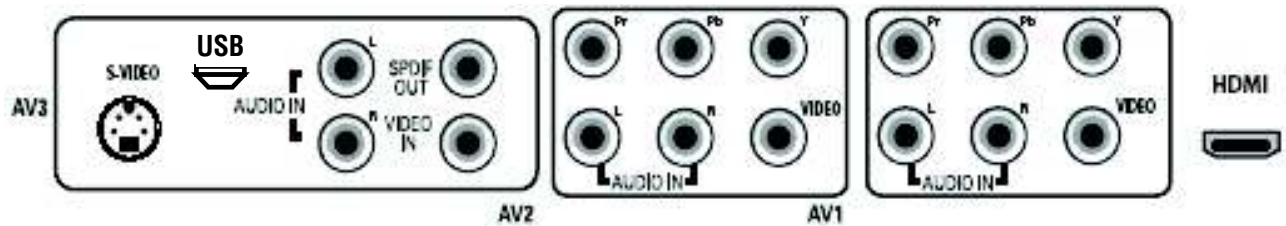
Adjustment stand of white Balance:

	<i>Normal</i>	<i>Cool</i>	<i>Warm</i>
CCT	10900° K	13500° K	6500° K
x	276 ± 5	267 ± 5	314 ± 5
y	283 ±.5	272 ± 5	324 ± 5

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Interface

x : Not support ✓ : Supported 1. RS232 [x] 2. USB [✓] 3. RF [x]



USB interface is on the back bottom or right bottom of the set.

Software upgrade

There are main application software and parameter need to be updated for the new set.

Main Application Software upgrade

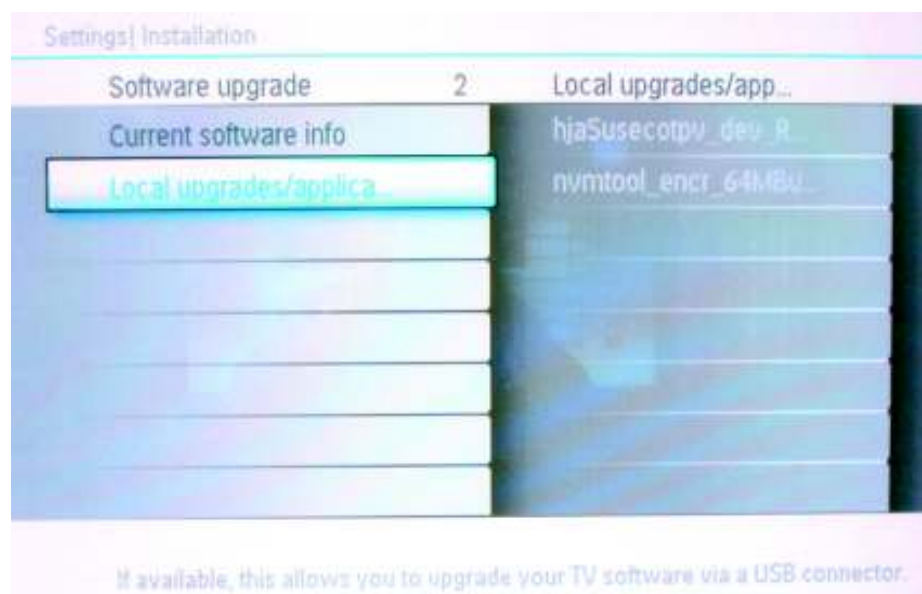
The main application software is copied to Nand Flash via USB.

1. File for the main application software upgrade

The upg file which you want to be upgraded should be copied to the folder “upgrades” in the root of USB, the file which is named as “hja5usecotpv_dev_RXX.upg”(the ‘XX’ of the filename is the revision of the software), and the file size is about 9875K.

2. Upgrade the main application software in normal mode

- Push the USB in the USB interface of the PDP TV set.
- The PDP TV set is in power on mode (normal mode) .
- Enter the user menu, select “Installation->software upgrade->Local upgrades/application” with IR Remoter, the application will check the software from USB automatically.

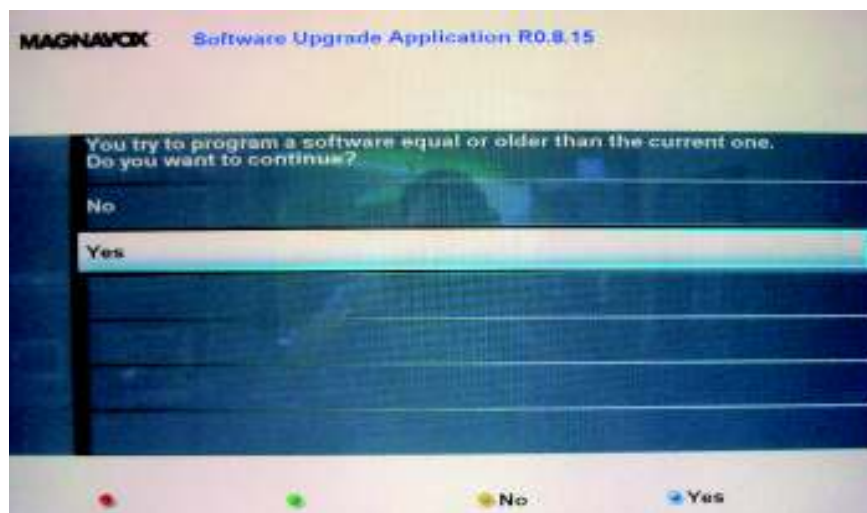


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- d) Select the file you want to update to the TV set and use INFO key with IR Remoter to do “Upgrade now”.



- e) If the software version you selected is equal or older than current one, the OSD for confirmation will be displayed, choose YES (FORMAT key) to upgrade and No (✓ key) to cancel the upgrade; else the software will be upgraded automatically.



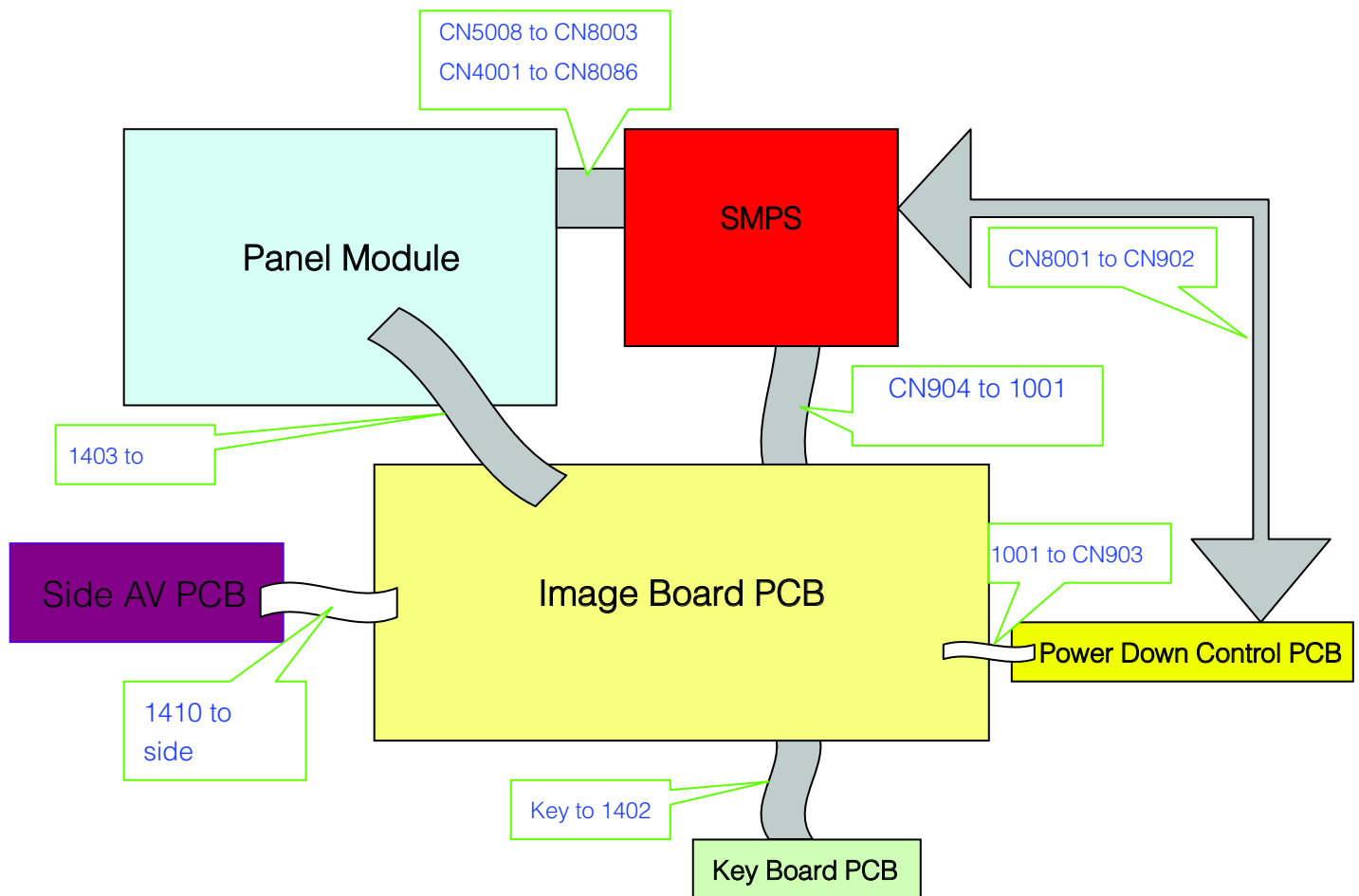
- f) When the upgrade is finished automatically, reboot the set



Function block diagram

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PDP unit block diagram and functions



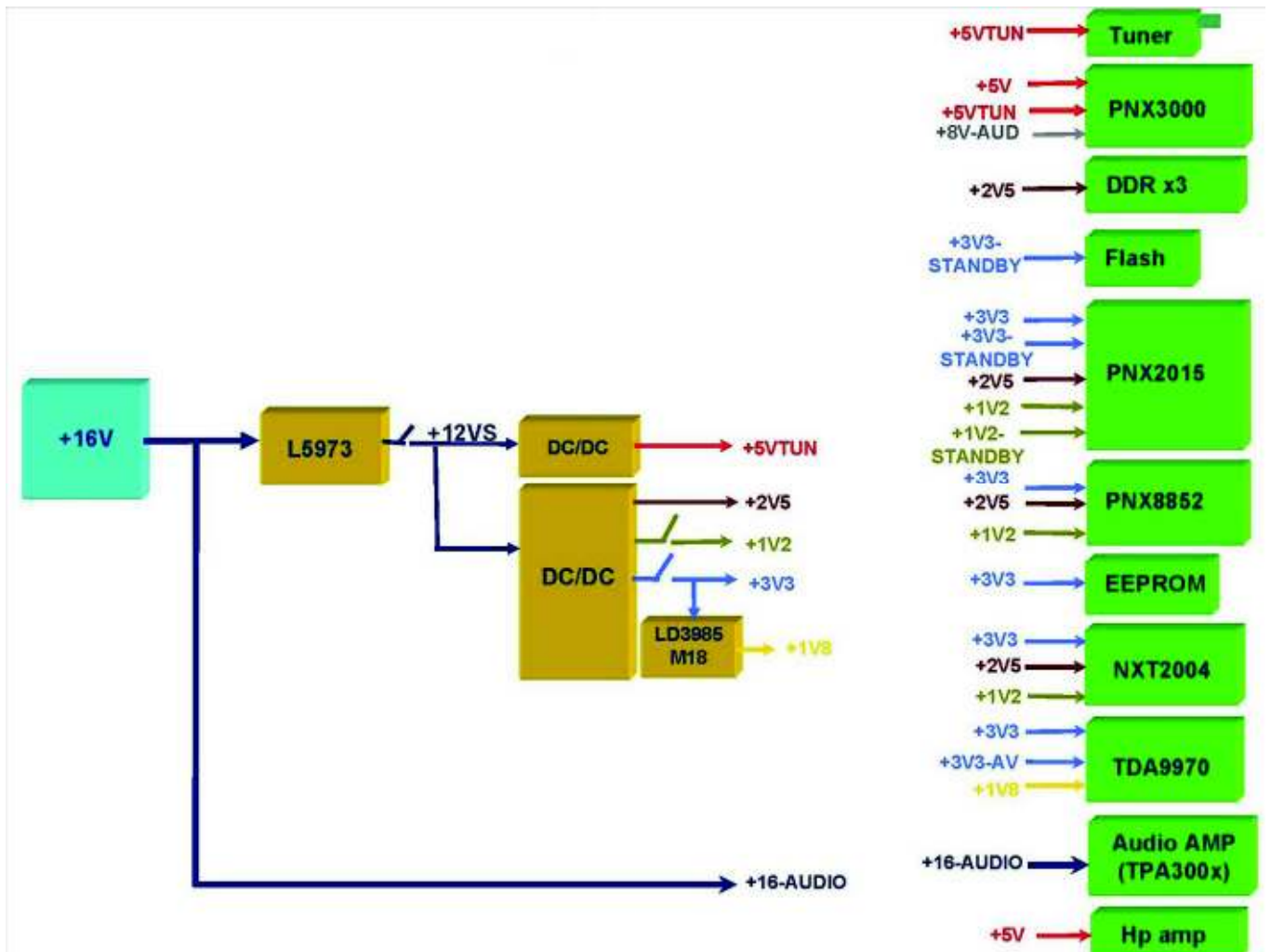
Function of Boards:

- 1) IMAGE Board : Control all input signals, Decode the video signal, De-interlace, and send digital signals (LVDS signal) sent from image Board and display
- 2) PDC Board: Power Down Control Board
- 3) SIDE AV Board: The input signal interface
- 4) Power Board: Supply Power for Panel and Image Board
- 5) KEY Board: POWER, Signal Source, MENU, CH+, CH - / VOL +, VOL -

Part apt to decrease:

- 1) BEZEL, REAR COVER, STAND& GLASS FILTER
- 2) Panel and its boards
- 3) RCA plug

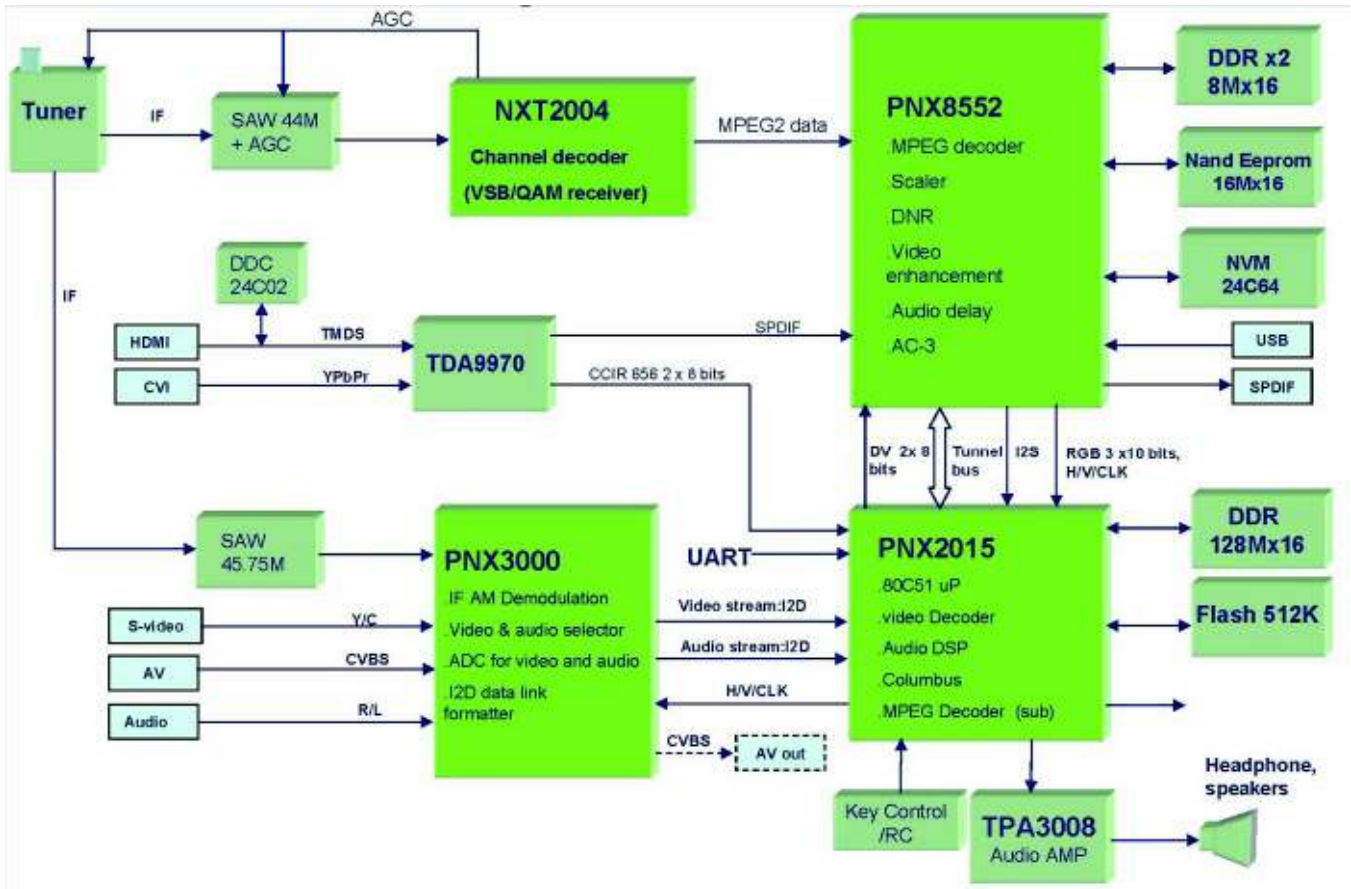
Power management



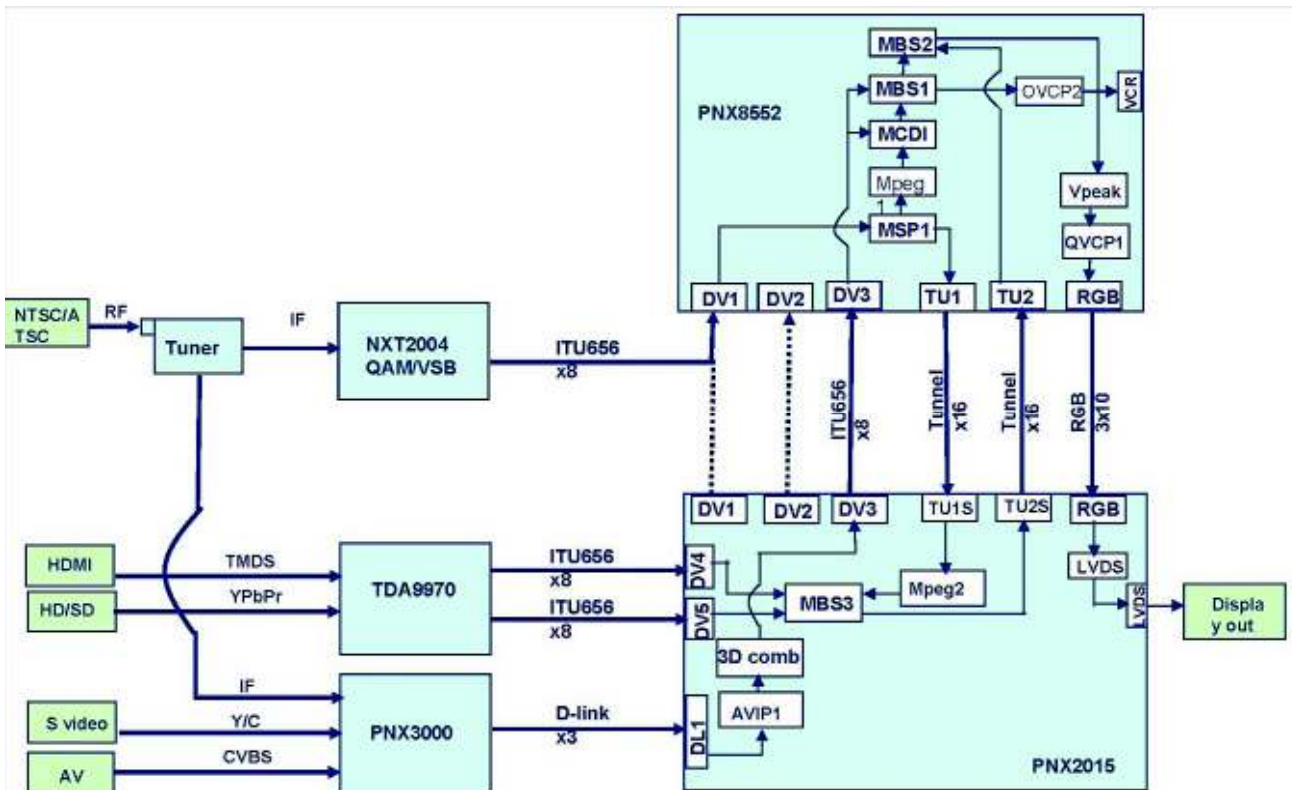
Function block diagram

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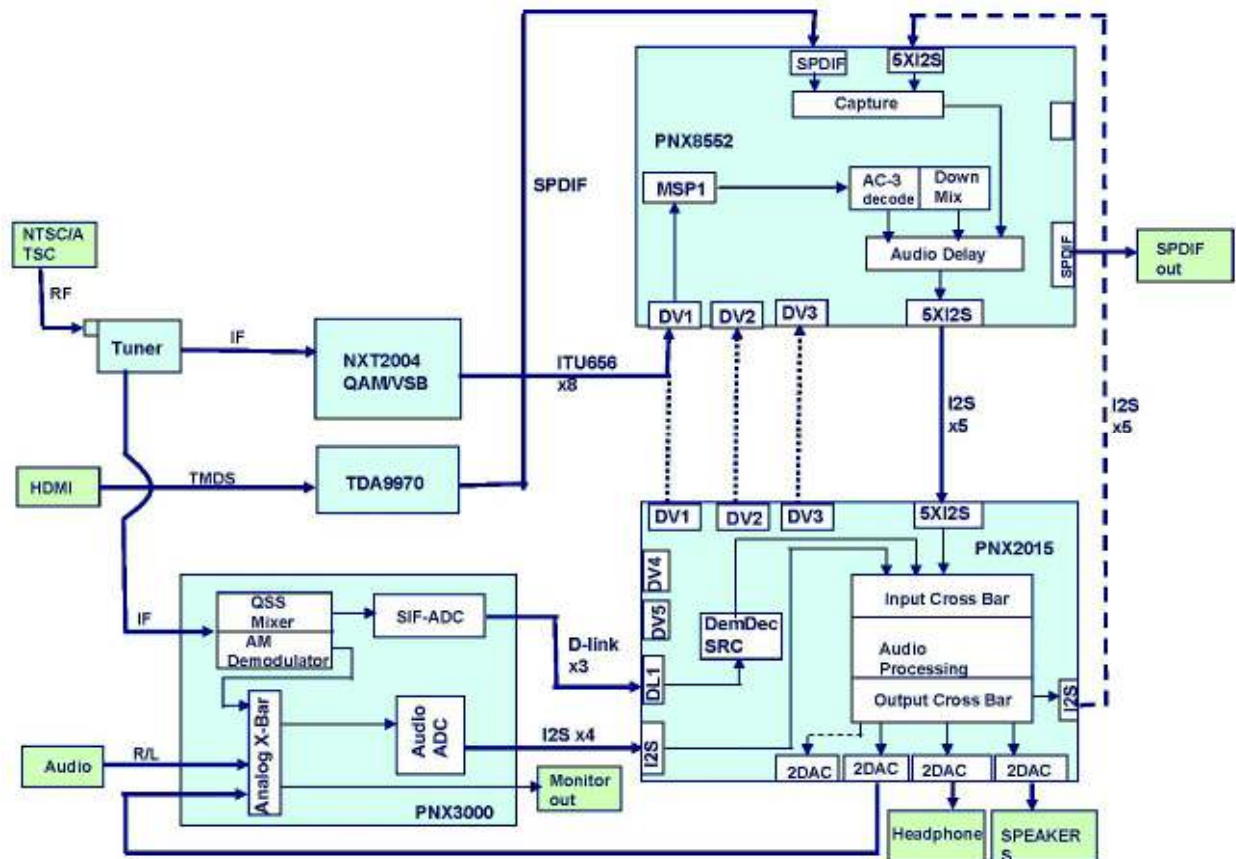
Function block



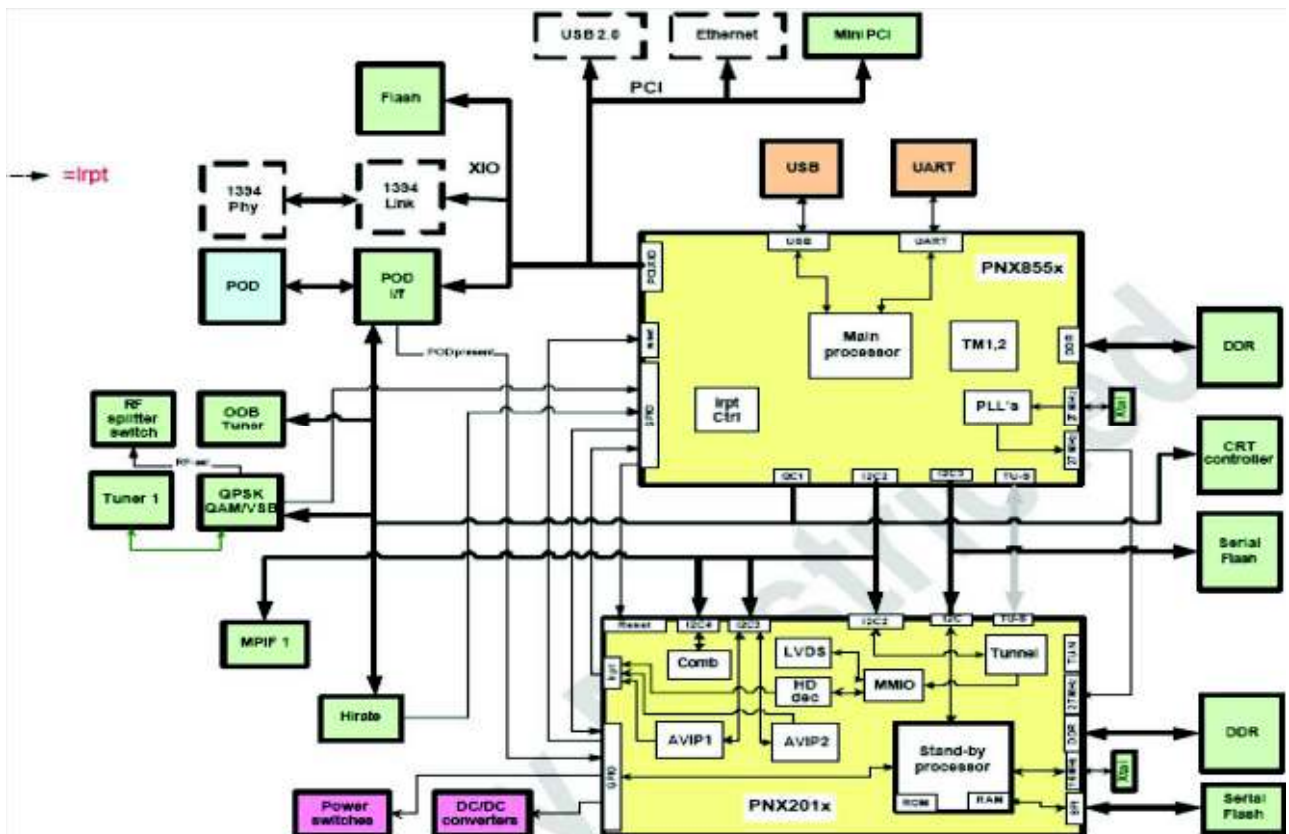
Video Function block



Audio Function block



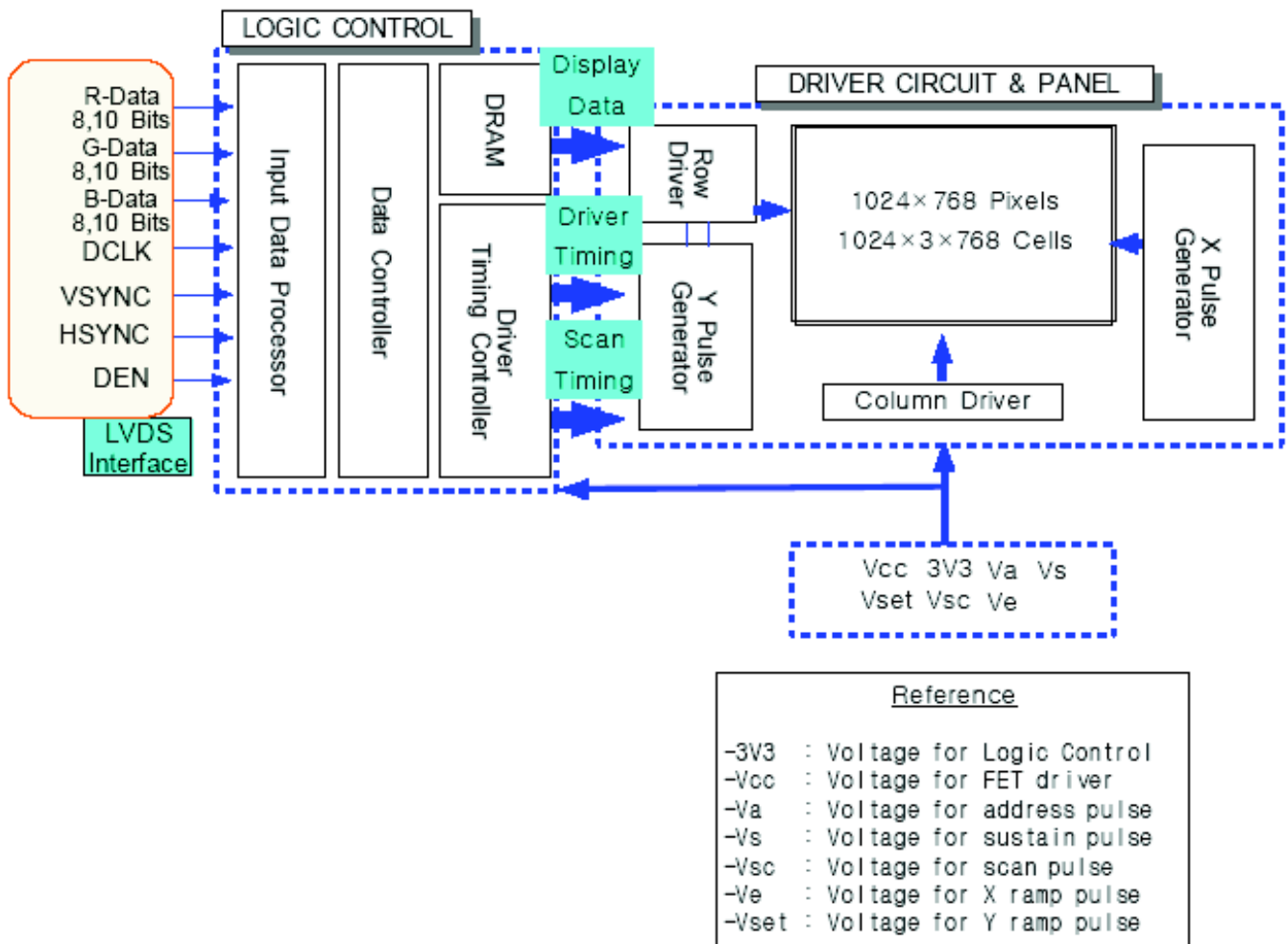
Control Function block



Function block diagram

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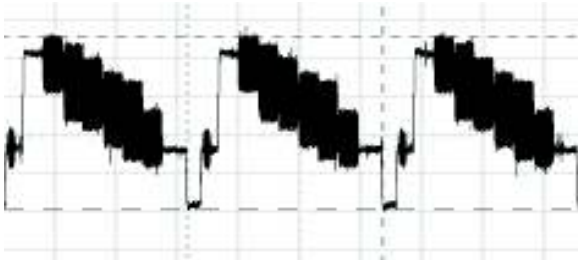
Block diagram of PDP PANEL module



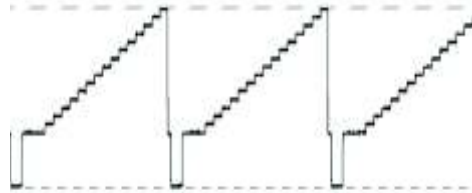
The wave of the video signal form

1. CVBS input

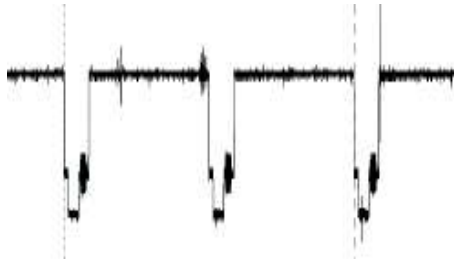
8COLOR BAR OF (CVBS) (II17)



16 GARY STAIR OF (CVBS) (II17)



WHITE SCREEN SIGNAL OF (CVBS) (II17)

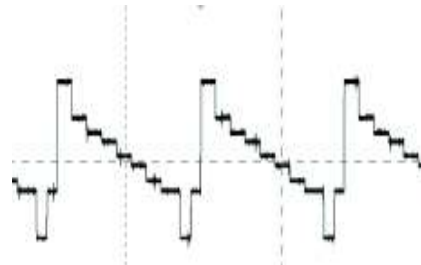


2. S- VIDEO

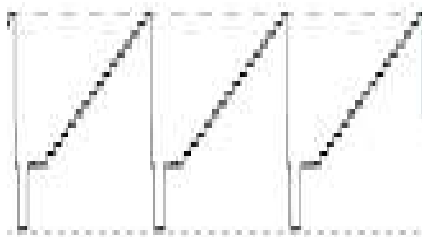
8 COLOR BAR OF S-VIDEO (C) SIGNAL (I809)



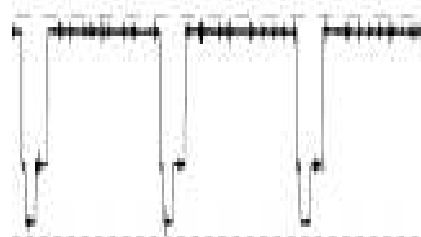
8 COLOR BAR OF S-VIDEO (Y) SIGNAL (I810)



16 GARY STAIR OF S-VIDEO (Y) SIGNAL (I810)



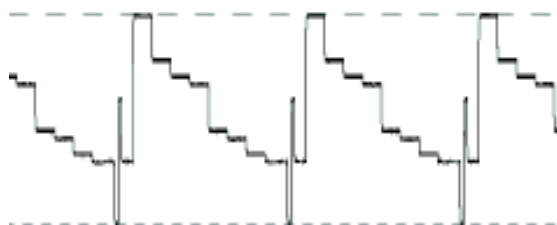
WHITE SCREEN OF S-VIDEO (Y) SIGNAL (I810)



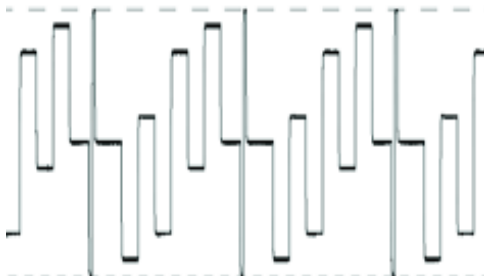
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3. YPbPr (COMPONENT) SIGNAL

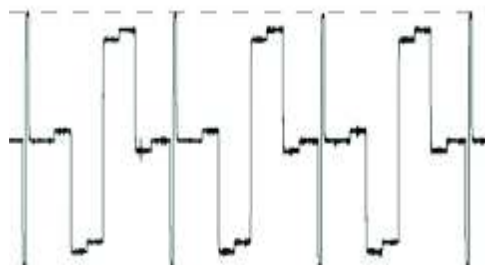
8 COLOR BAR OF YpbPr(720P) (Y) SIGNAL(I805)



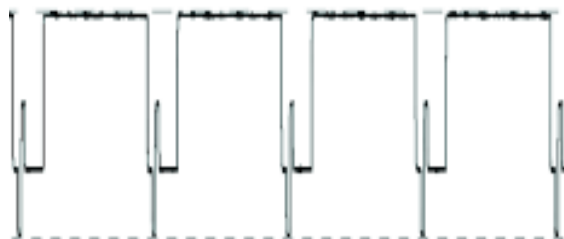
8 COLOR BAR OF YpbPr(720p) (Pb) SIGNAL(I807)



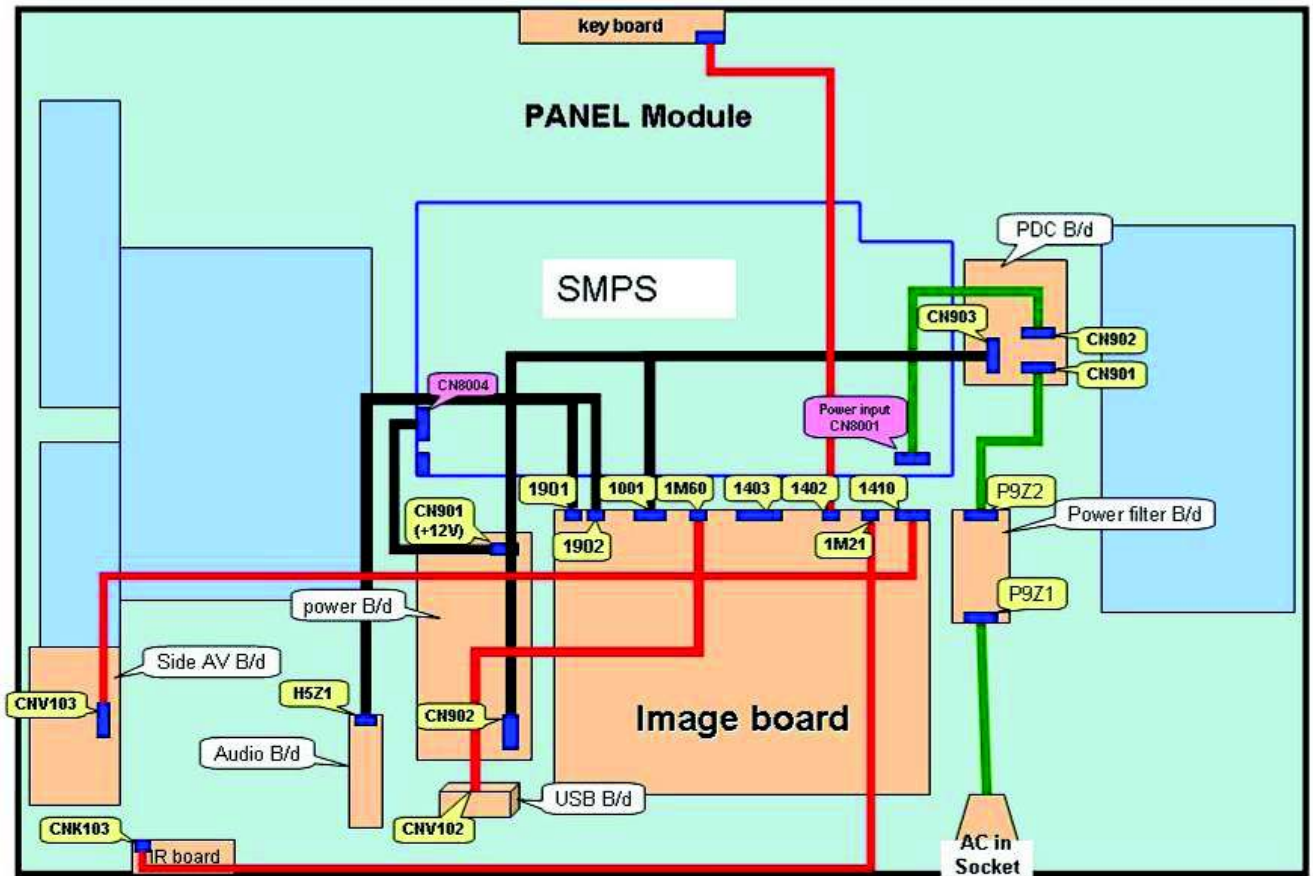
8 COLOR BAR OF YpbPr(720p) (Pr) SIGNAL(I804)



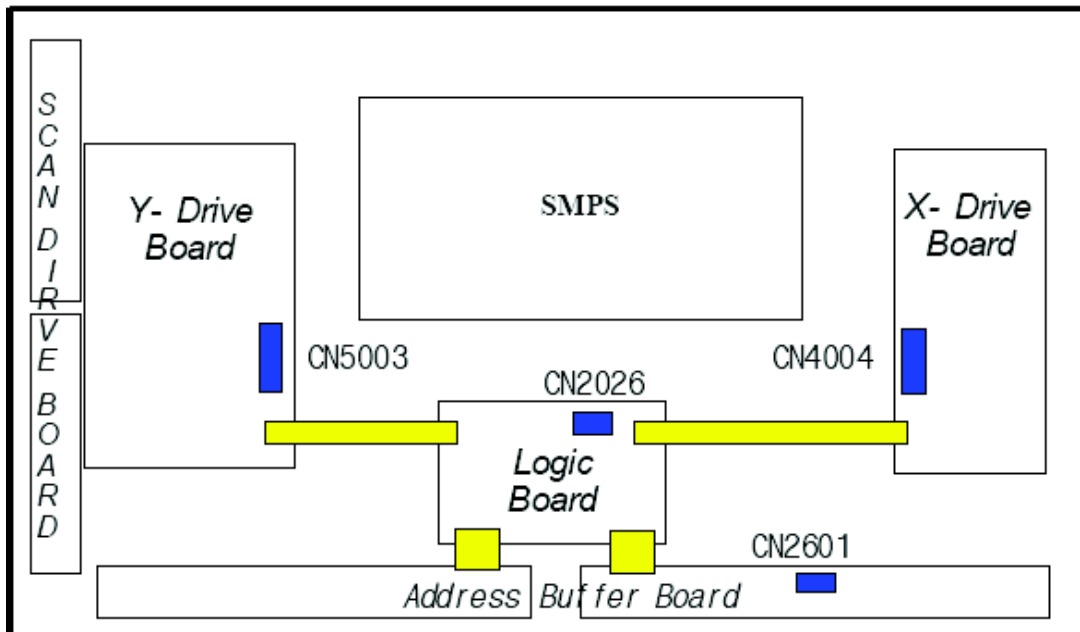
WHITE SCREEN OF YpbPr(720p) (Y) SIGNAL(I805)



Wiring diagram of PDP



Wiring diagram of PANEL power input

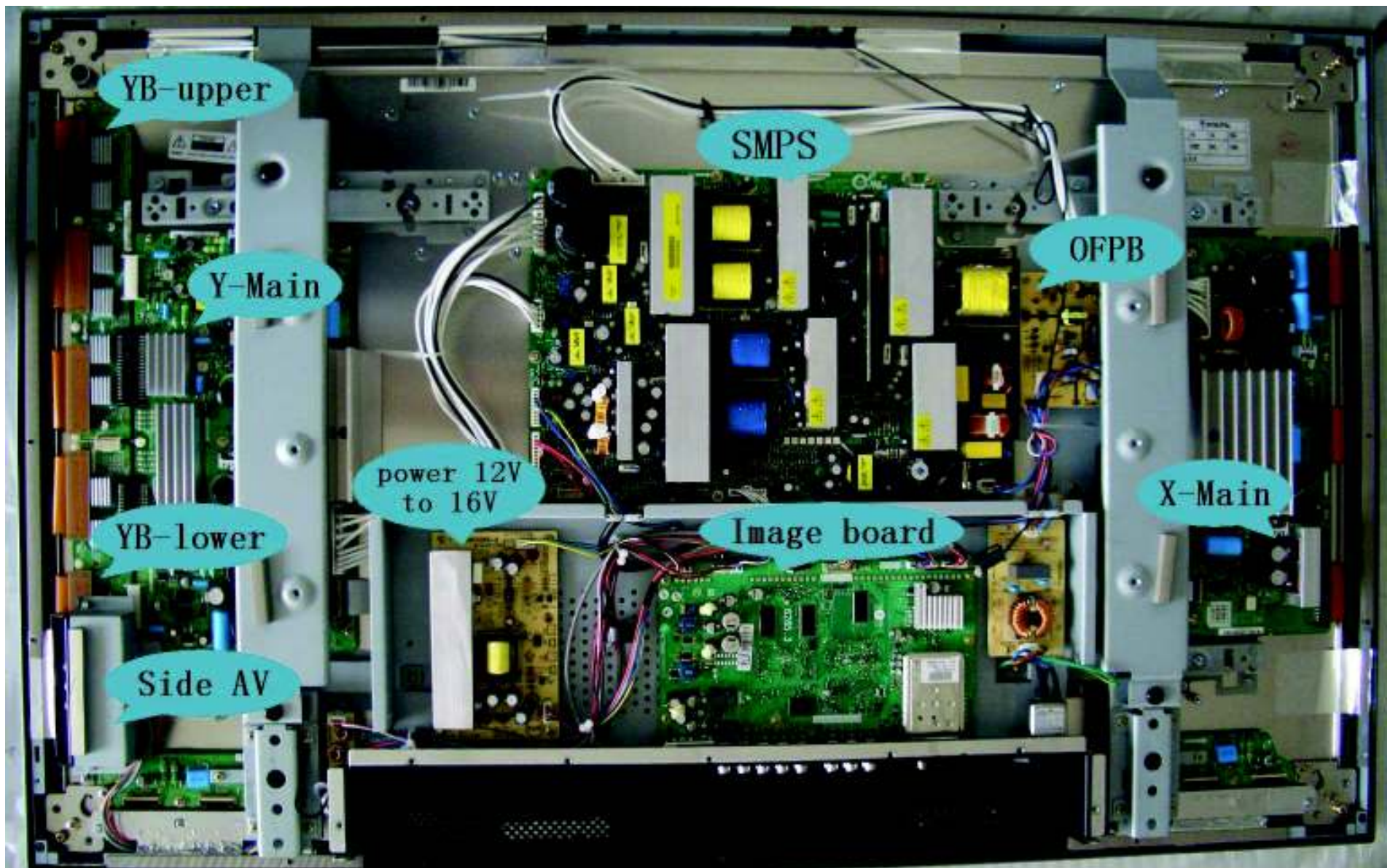


1. The Input Power Connector in Y-Drive Board is named as " CN5003".
2. The Input Power Connector in X-Drive Board is named as " CN4004".
3. The Input Power Connector in Logic Board is named as " CN2026".
4. The Input Power Connector in Address Buffer Board is named as " CN2601".

Mechanical Instructions

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PDP Internal view

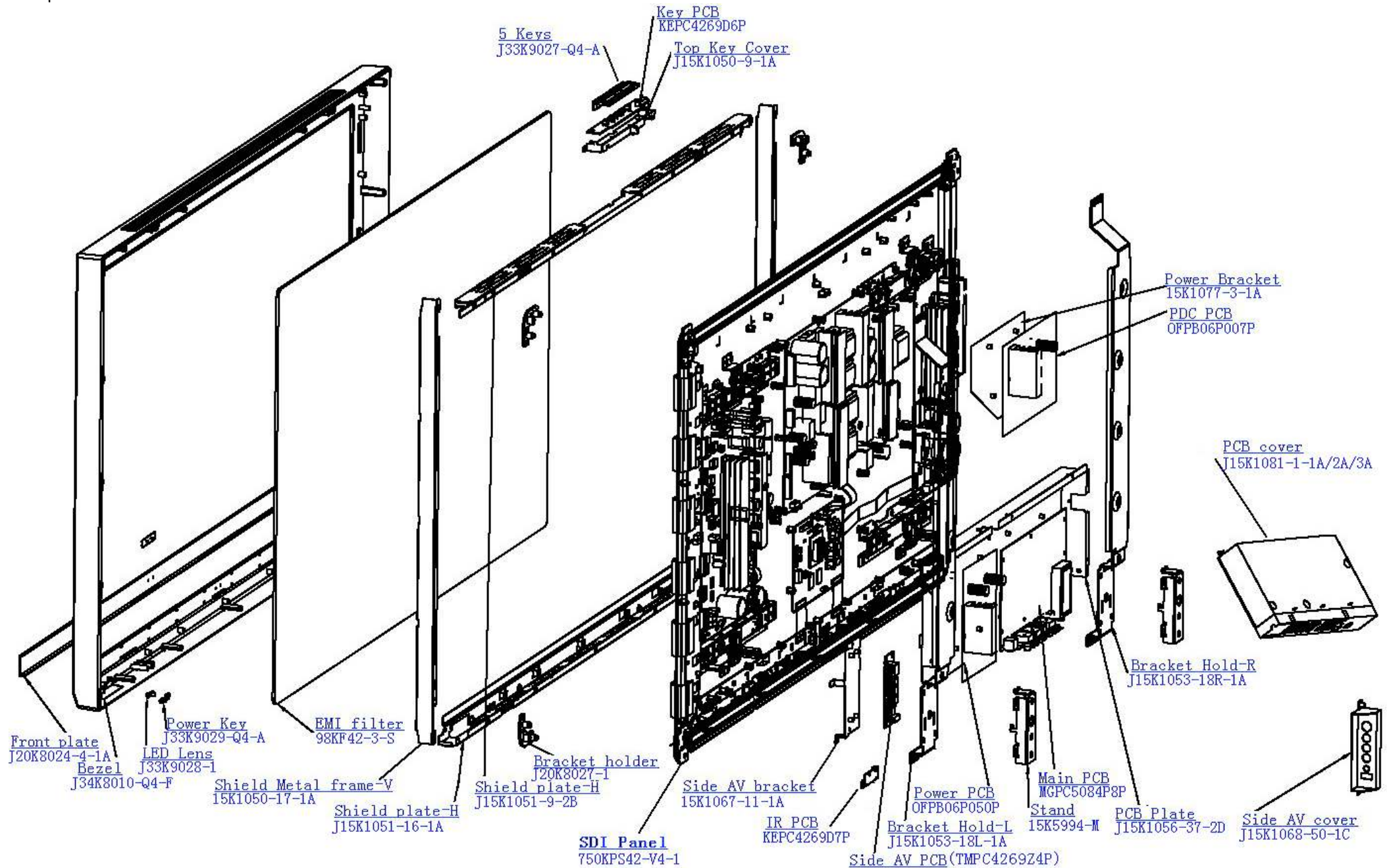


Mechanical Instructions

-64- 42MF231D/37

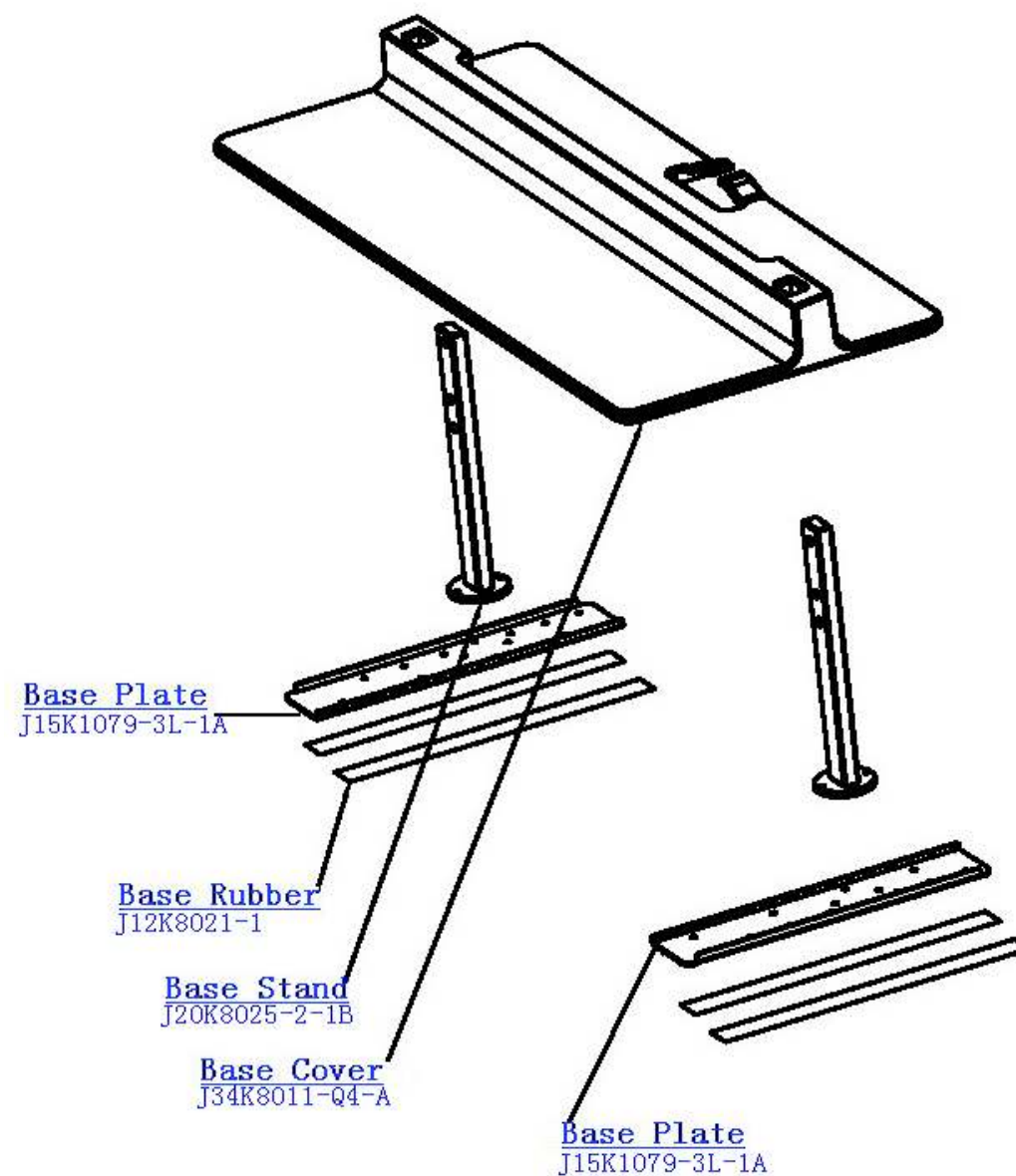
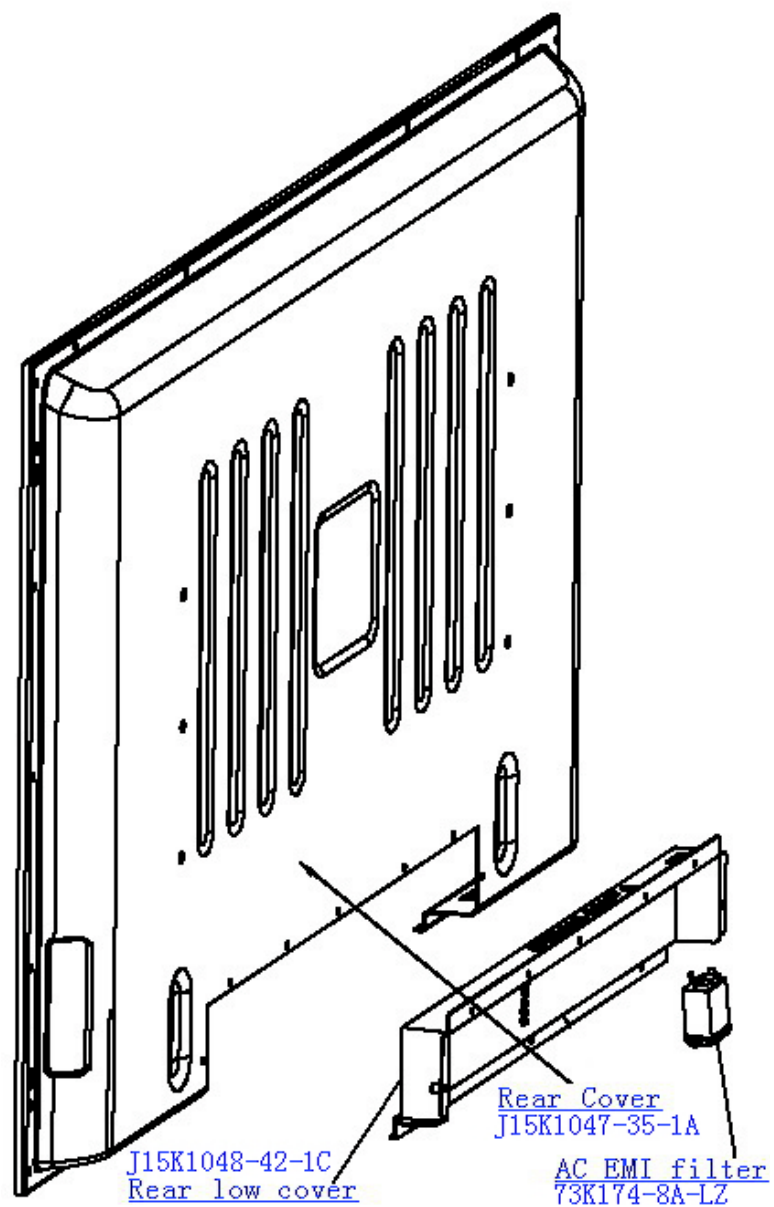
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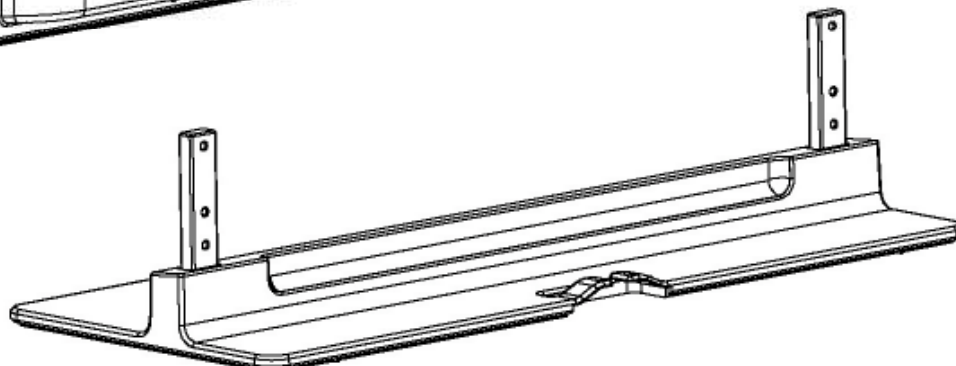
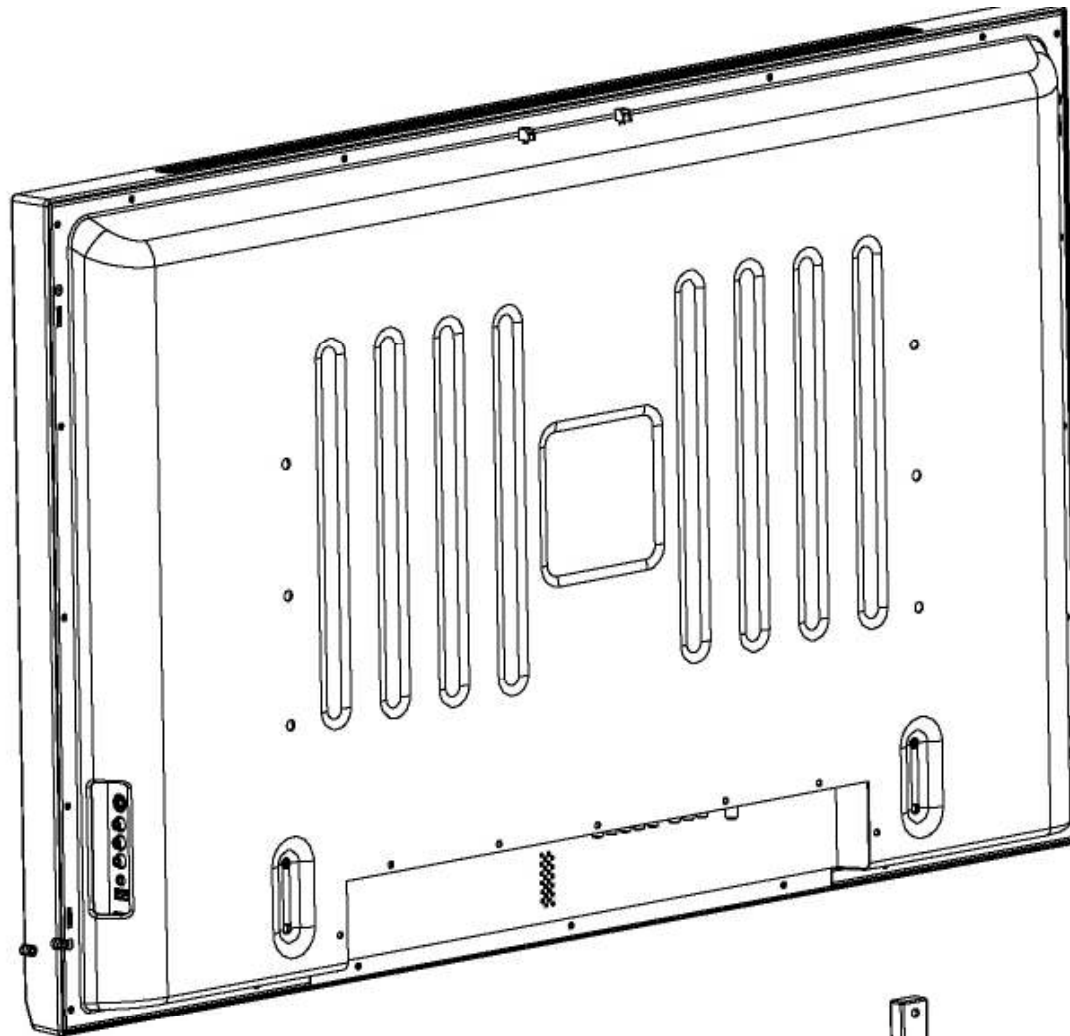
Explode view



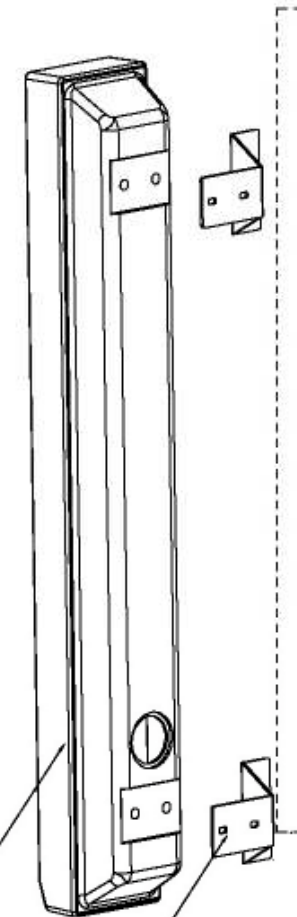
Mechanical Instructions

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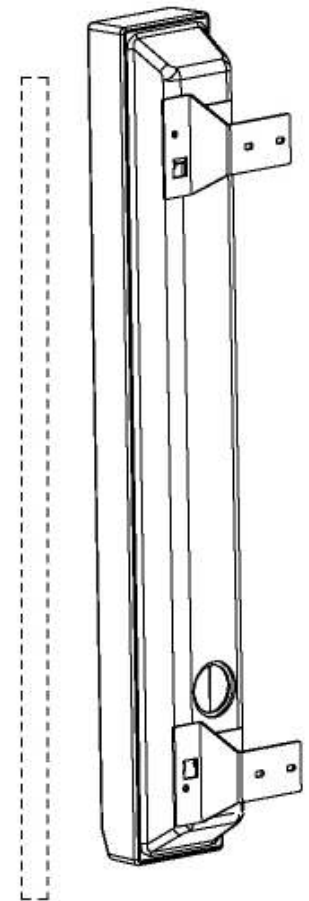


Side Speaker
78KS42-1-8P



Speaker Bracket
J15K1080-2-1B/2B/3B/4B

Speaker Underlay
J12K8023-1



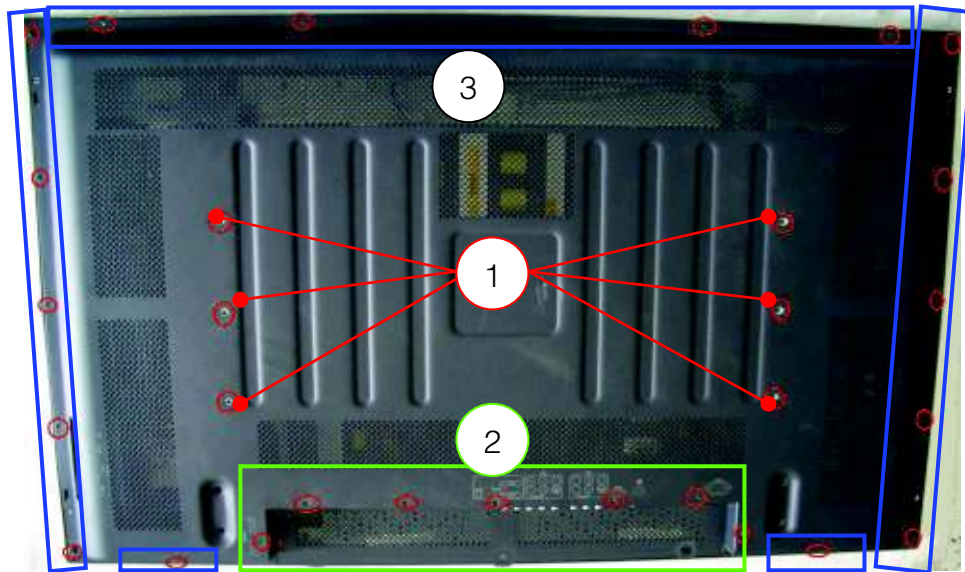
Mechanical Instructions

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Parts list of explode view

12NC	TPV part no.	Q'ty	Description
Need update	J20K8024-4-1A	1	Front Plate
9965 000 39200	J34K8010-Q4-F	1	Bezel
9965 000 39198	J33K9028-1	1	LED Lens
9965 000 39199	J33K9029-Q4-A	1	Power Key
9965 000 34086	98K F42-3-S	1	EMI Conductive Filter
Need update	15K1050-17-1A	2	Shield Metal Frame-V
Need update	J15K1051-16-1A	1	Shield Plate-H
Need update	J15K1051-9-2B	1	Shield Plate-H
Need update	J20K8027-1	4	Bracket Holder
9965 000 39197	J33K9027-Q4-A	1	5 KEY for Top Key
9965 000 39177	715K1973-1	1	KEY PCB
Need update	J15K1050-9-1A	1	Top Key Cover
Need update	15K1077-3-1A	1	Power Bracket
9965 000 39180	715K1380-3	1	PDC PCB
9965 000 39175	PANEL	1	SDI PANEL
Need update	15K1067-11-1A	1	Side AV Bracket
9965 000 39178	715K1974-1	1	IR PCB
9965 000 39184	715K1891-1	1	Side AV PCB
Need update	J15K1053-18L-1A	1	Bracket Hold-L
9965 000 39181	715K2085-2	1	Power PCB
Need update	15K5994-M	2	Stand Cover
9965 000 39179	715K3138-158-662-7103	1	Main board PCB
Need update	J15K1056-37-2D	1	PCB Plate
Need update	J15K1053-18R-1A	1	Bracket Hold-R
Need update	J15K1081-1-1A /2A/3A	1/1/1	PCB Cover
9965 000 39203	J15K1068-50-1C	1	Side AV Cover
9965 000 39201	J15K1047-35-1A	1	Rear Cover
9965 000 39202	J15K1048-42-1C	1	Rear Low Cover
Need update	73K 174-8A-LZ	1	AC EMI Filter
Need update	J15K1079-3L-1A	1	BASE Plate
Need update	J12k8021-1	4	BASE Rubber
Need update	J20K8025-2-1B	2	BASE Stand
Need update	J34K8011-Q4-A	1	BASE Cover
Need update	J15K1079-3R-1A	1	BASE Plate
Need update	78K S42-1-8P	2	Side Speaker
Need update	J15K1080-2-1B/2B/3B/4B	1/1/1/1	Bracket Speaker
Need update	J12K8023-1	2	Speaker Underlay

Back Cover Removal



- 1) Remove the six big black colored screws in the panel holder as the red-circle showed (1).
- 2) Remove the seven black colored screws around the terminals as the green-pane showed (2).
- 3) Remove the Sixteen black colored screws around the back cover as the blue-pane showed (3).



- 4) Carefully prize up the back cover from the left of the PDP (5).

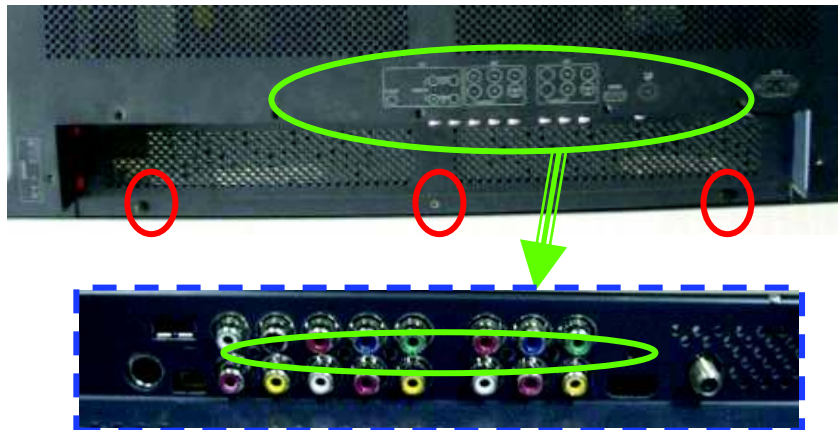


- 5) Carefully remove the Back Cover from the top of the PDP, and store in a safe place.



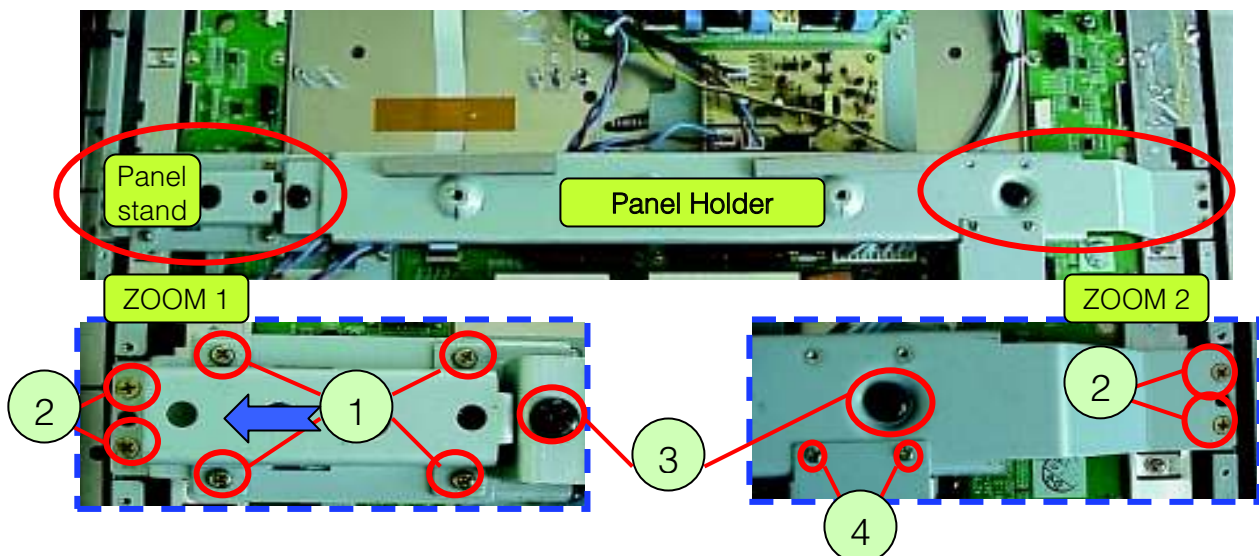
- 6) Done.

Rear Low Cover removal

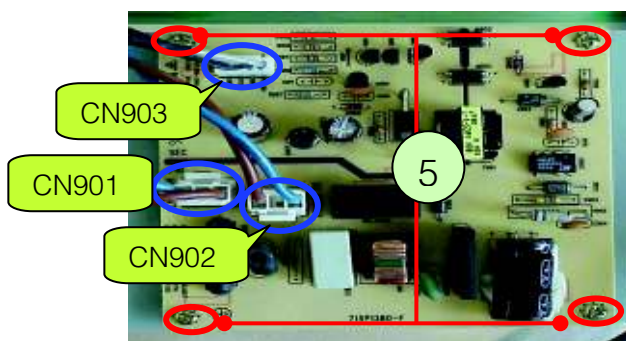


- 1) Remove the three black screws in Rear low cover.
- 2) Remove the six black screws .

PDC Board (power down control) Removal

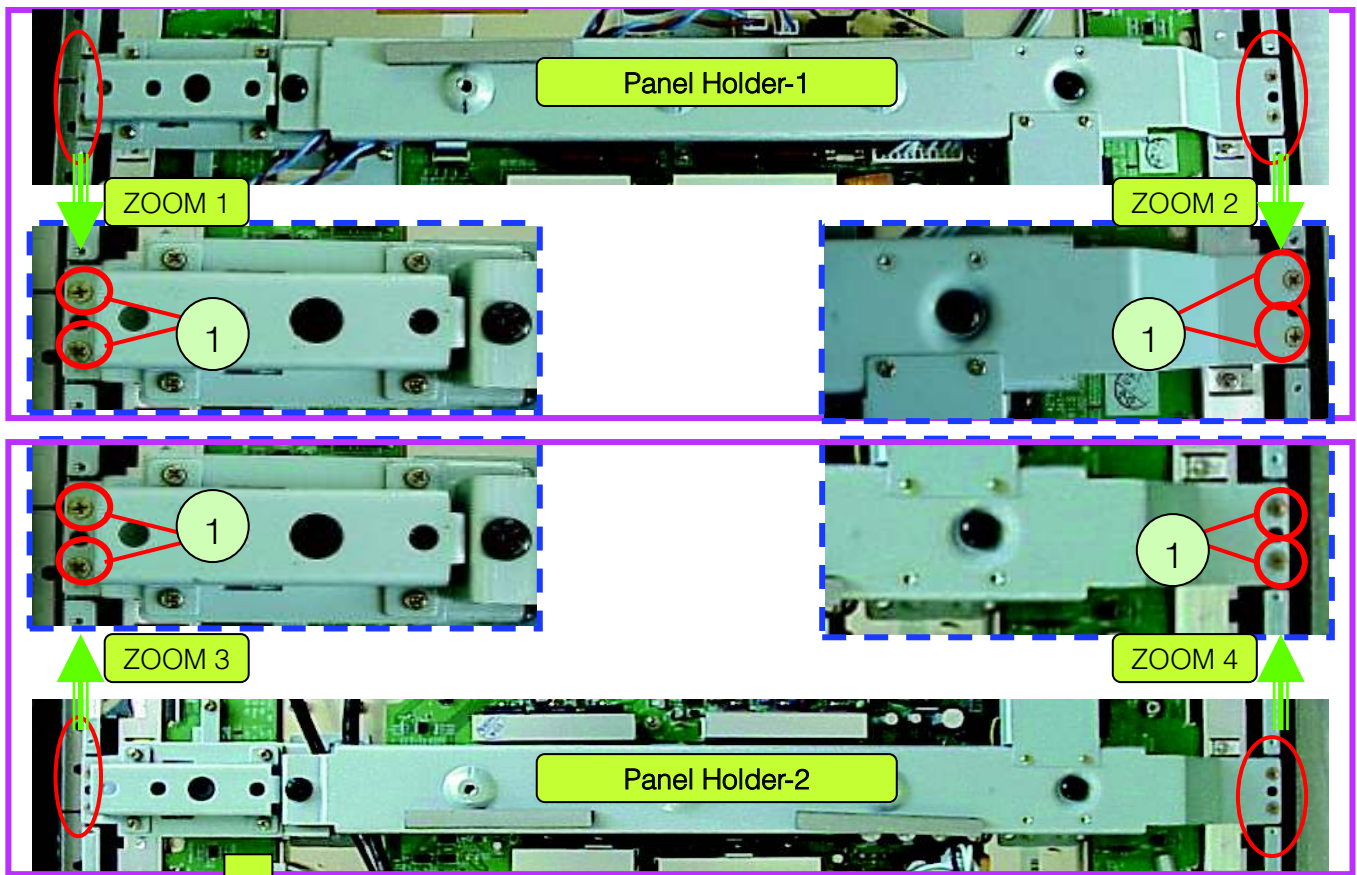


- 1) Remove the four silver screws (1) and remove the panel stand from panel holder as the direction arrowed showed.
- 2) Remove the four silver flat screws (2).
- 3) Remove the two black screws (3)
- 4) Remove the two silver screws (4)
- 5) Remove the panel holder from PDP.

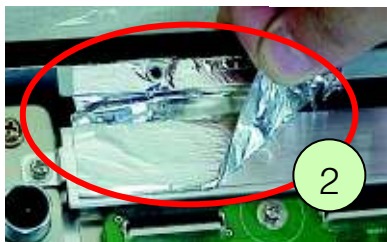


- 6) Disconnect CN901,CN902 and CN903 from PDC board.
- 7) Remove the four silver screws (5), and remove the PDC board.

Panel Module Removal



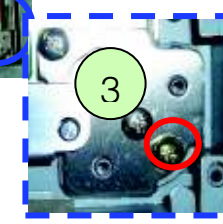
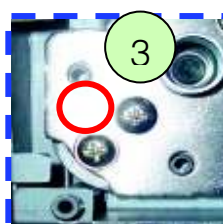
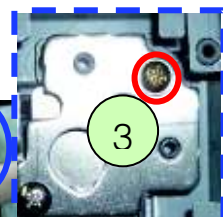
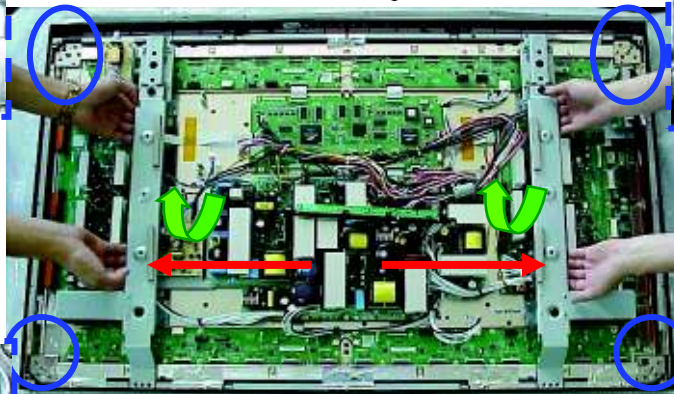
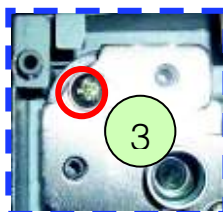
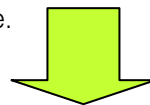
1) Remove the eight silver flat screws around the two panel holder (1).



2) Remove all the aluminum foil around the panel (2), after assemble the new panel, must re-affix the aluminum foil, if it's broken must change a new one, otherwise, the EMI can be affected.

3) Remove the four silver screw around the PANEL corner (3).

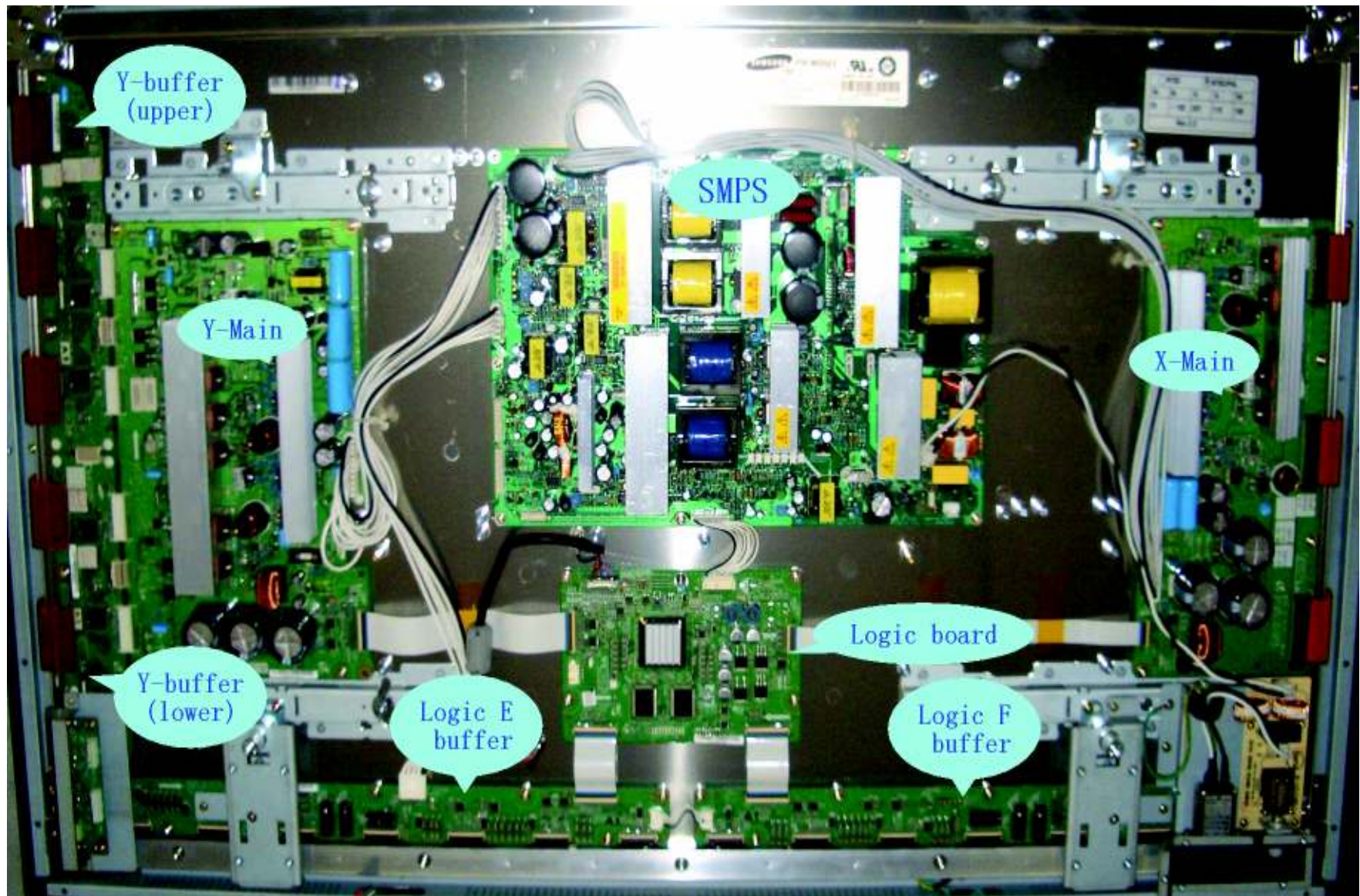
4) Two people hold the panel holder 1 and 2 respectively, then uplift the panel module and move it out form the front cover(Bezel), and store in a safe place.



Disassembly and Assembly

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PANEL Internal view

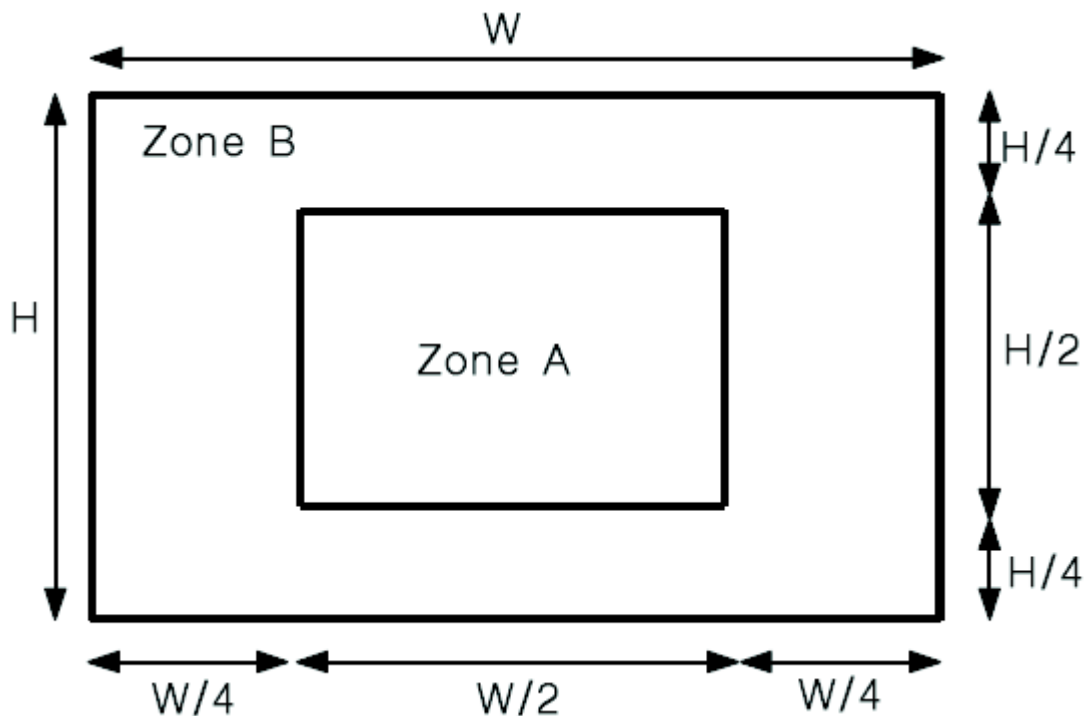


Cell Defect of PANEL

A panel may have defective cells that cannot be controlled. These defective cells can be categorized into three types;

- (1) **Non-lighting** cell defect: defect in which the cell is always off
- (2) **Non-extinguishing** cell defect: defect in which the cell is always on.
- (3) **Flickering** cell defect: defect in which the cell is flickering.
- (4) Test Pattern: Full White, Full Red, Full Green and Full Blue with 1023(10Bit) gray level.

The display cell defect specifications define the allowed limits for display cell defects and are used as the criteria in determining whether a panel should be allowed.

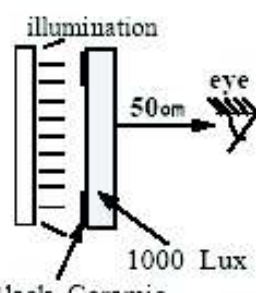
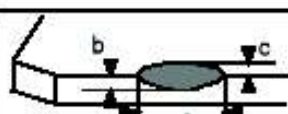


Item	Specification	
	Number of cell defects	Distance between cell defects
Non-lighting cell defect	Zone A: 3 and less Zone B: 8 and less	Regardless of A and B zone, -Distance between the cells is over 15mm
Non-extinguishing cell defect	Zone A: 0 Zone B: 1 and less	
Flickering cell defect	Zone A: 0 Zone B: 1 and less	
Total Defect	Total number of cell defects in Zone A and B is 8 and less	

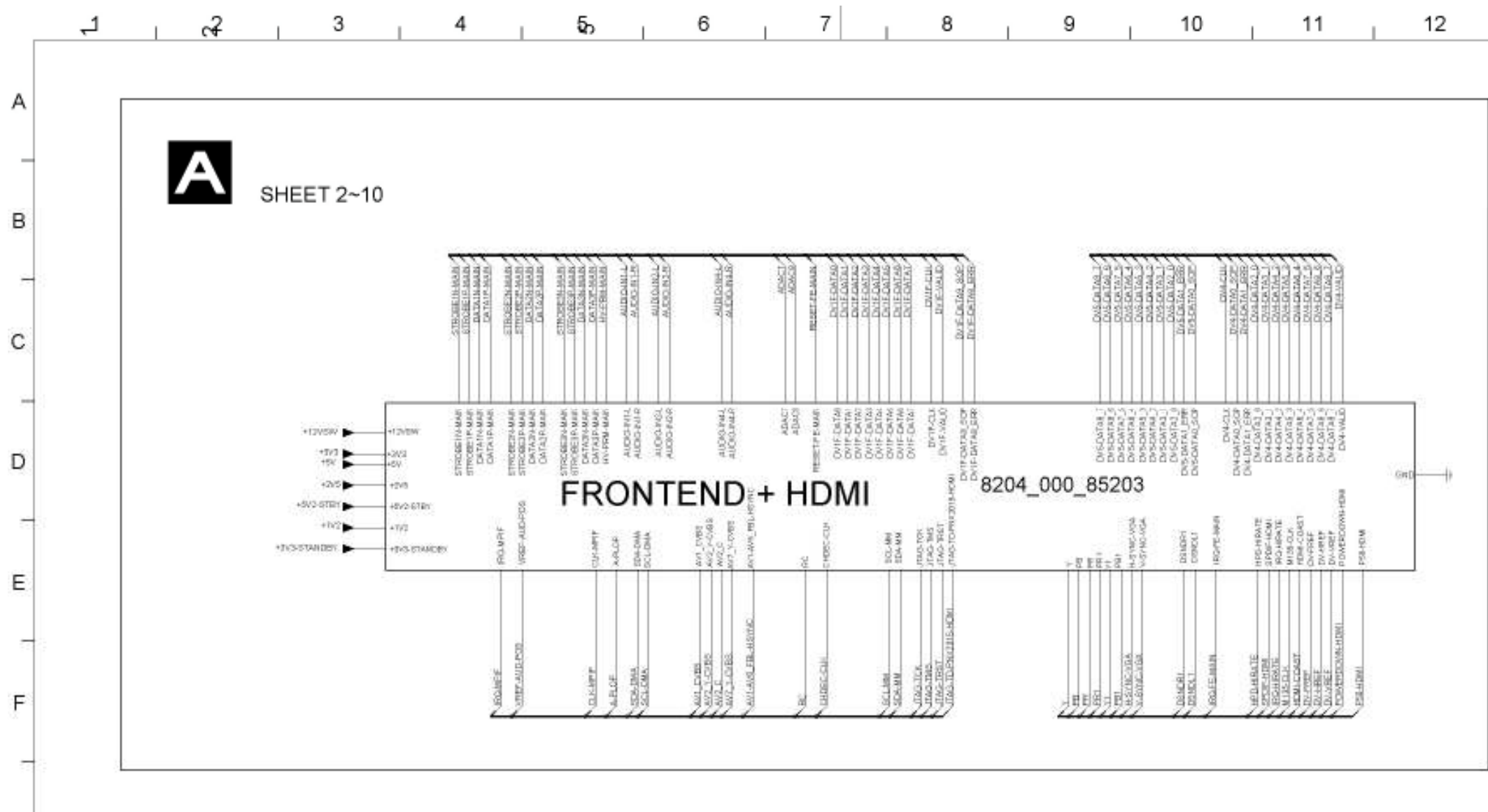
Definition of Pixel defects

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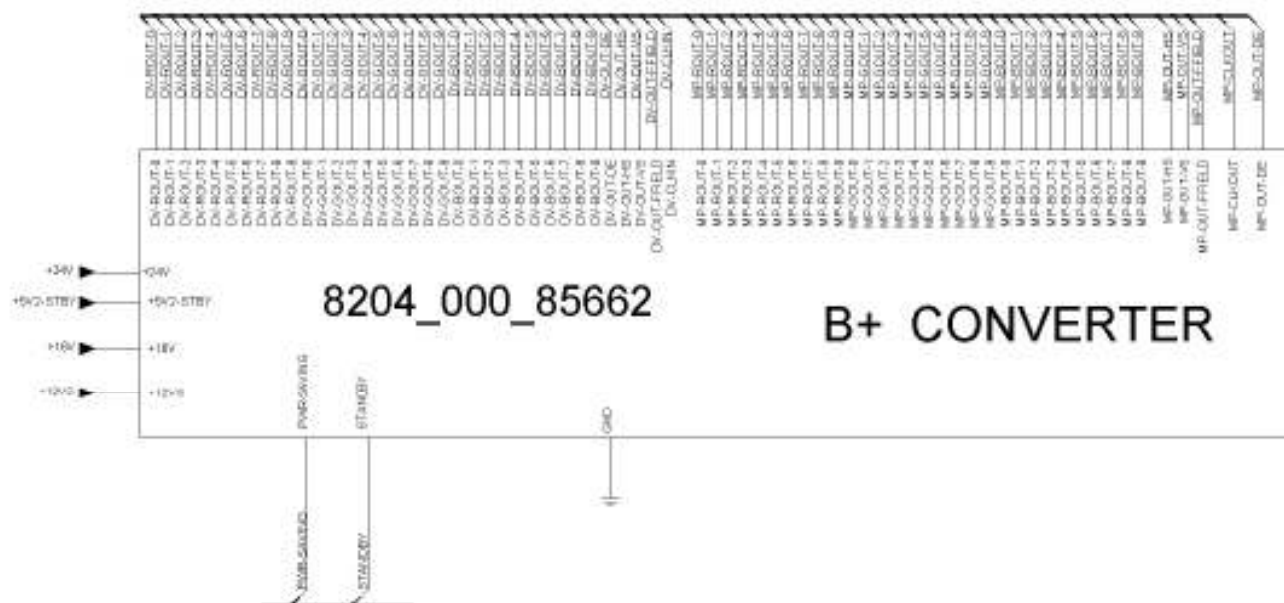
Defects of Glass filter

Items	Standard			Condition and Process
Linear defect	Width(mm)	Length(mm)	Allow defects	- Method 
	$0.05 \leq W < 0.1$	$10 < L \leq 20$	10	
	$0.05 \leq W < 0.1$ $W < 0.05$	$L < 10$ $10 < L \leq 20$	15	
	$W < 0.05$	$L < 10$	Allowed	
Point defect	Type	Size(mm)	Allow defects	- Defect size : (long side+short side)/2
	White spot (Film bubble)	$1.5 < \phi \leq 2.0$	2	
		$1.0 < \phi \leq 1.5$	5	
		$0.5 < \phi \leq 1.0$	15	
		$\phi \leq 0.5$	Allowed	
	Glass bubble	$0.5 < \phi \leq 1.0$	2	
		$\phi \leq 0.5$	20	
	Black spot (foreign material)	$0.5 < \phi \leq 1.0$	5	
		$0.3 < \phi \leq 0.5$	15	
		$\phi \leq 0.3$	Allowed	
	Colord spot (Film)	$2.0 < \phi \leq 2.5$	2	
		$1.0 < \phi \leq 2.0$	15	
		$\phi \leq 1.0$	Allowed	
Mesh Defect	Lattice Opem		Lattice close	
	Lattice #	Allowed #	Size(mm)	Allowed #
	≤ 10	Ignored	$\phi < 0.5$	Ignored
	10~30	5	$0.5 \leq \phi \leq 1.0$	1
	≥ 31	0	$1.0 < \phi$	0
Film de-lamination	No peeling off over 2mm at the edge of Film.			- Naked-eye inspection
Chip	* $a \leq 2.0\text{mm}$ * $b \leq 1.0\text{mm}$ * $c \leq 1.0\text{mm}$			
Crack	No admission			
Contamin ation	Allowed if wiped off with dry cloth.			

- But, the distance between defects must be over 30mm.
- Any defect without prescribed contents on the specifications shall be settled on deliberation by both parties.

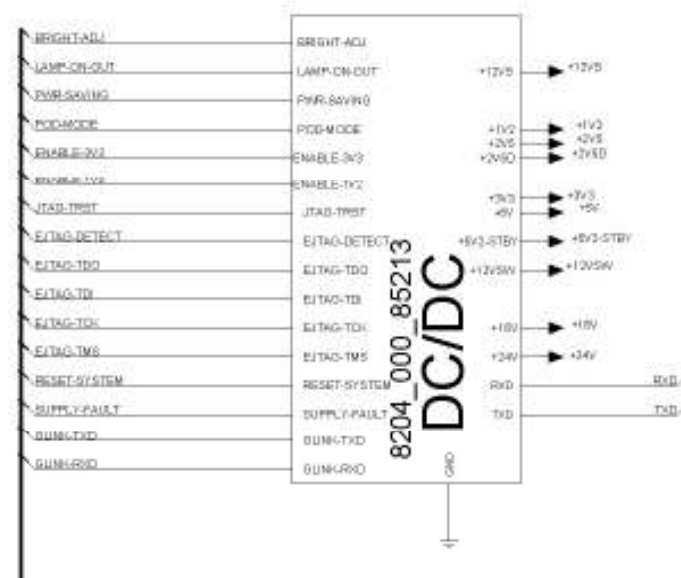


VIPER2



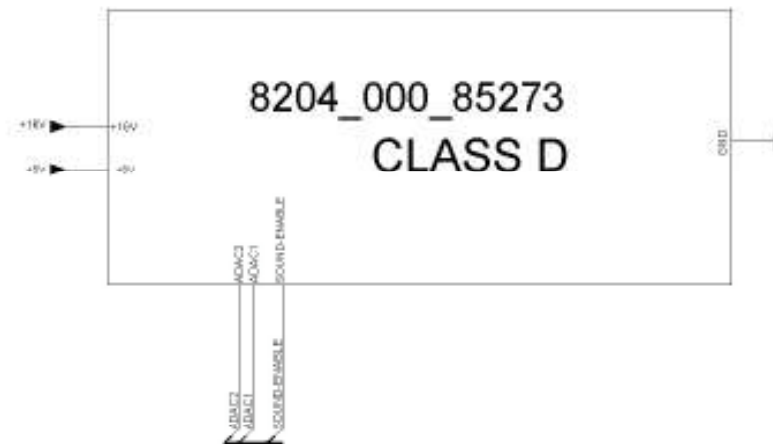


SHEET 25~26





SHEET 27~28



SCALER BOARD

SB: 62841 x2
PB: 62851

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CHN CA		SETNAME FL3			
CLASSNO		BLOCK DIRGRAM 26MF231D/37		2005-12-23	
					
2005-12-23 3				3138 158 64951	
NAME FY LocEntry Tail		SUPERS		30	
TV		CHECK		DATE 2005-12-23	
				ROYAL PHILIPS ELECTRONICS N.V. 2005	

16 17 18 19 20 21 22 23 24 25 26 27 28

UART diagram

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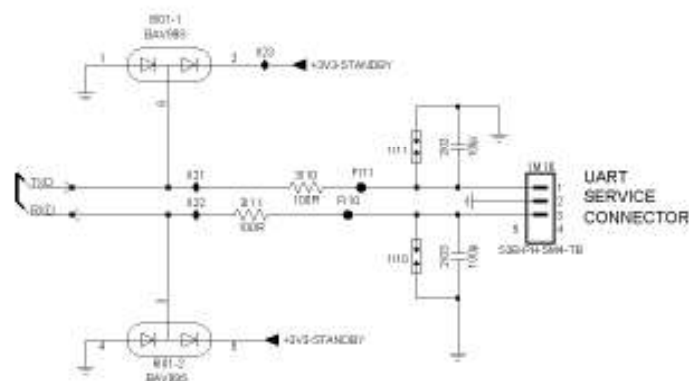
1110 E5
1111 D5
1M16 D6
2102 D5
2103 E5
3110 D4
3111 E4
6101-1 D4
6101-2 E4
F110 E5
F111 D5
121 D4
122 D4
123 D4

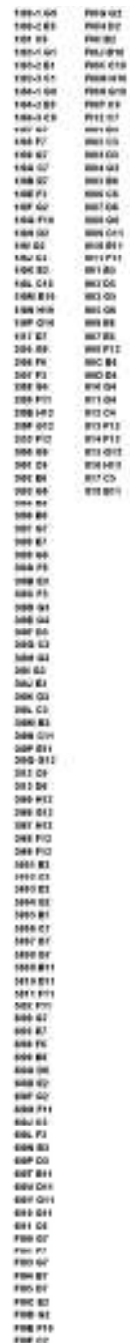
F30

UART

SCALER BOARD

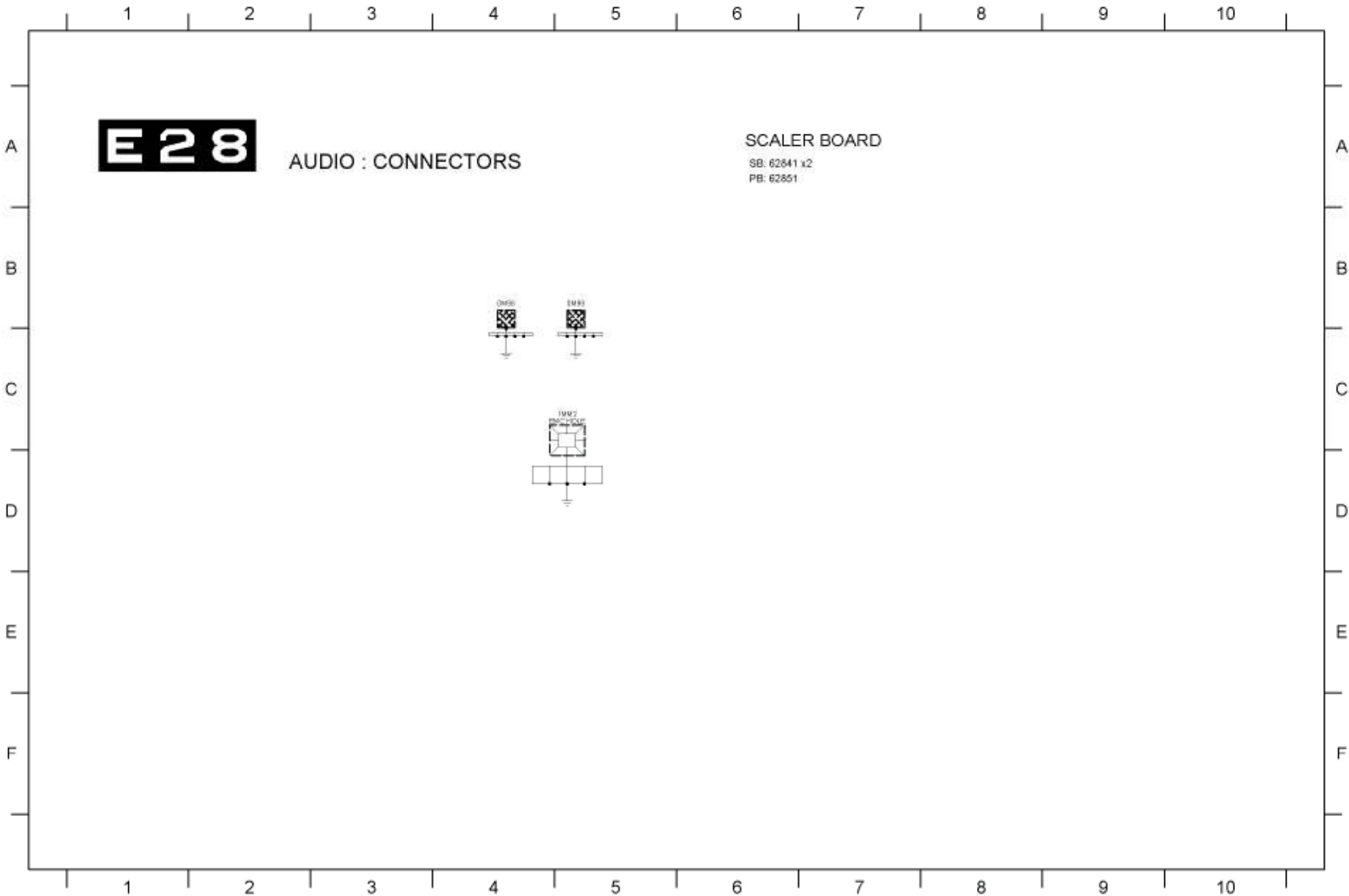
SB: 62841 x2
PB: 62851





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0K138 B4
0K139 B5
1MM2 C5



E27

AUDIO : AMPLIFIER

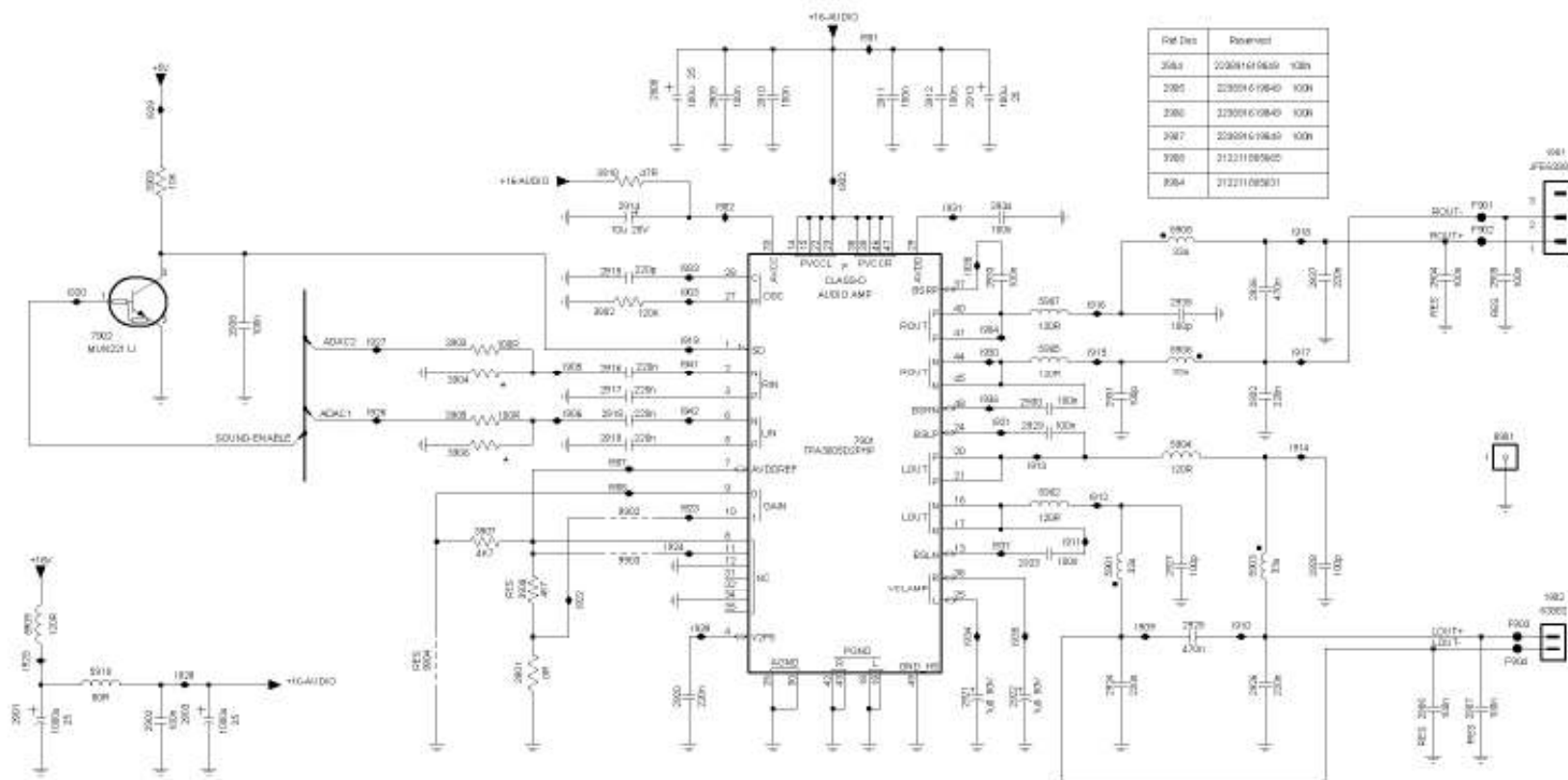
SCALER BOARD

SB: 62842 x2

PB: 62852

REF	VAL	QTY
1901	TP43005	TP43008
3063	1K8	628
3065	1K8	628

Ref Des	Description
3063	220001610640 100n
3065	220001610640 100n
3066	220001610640 100n
3067	220001610640 100n
3068	212211085025
3069	212211085031

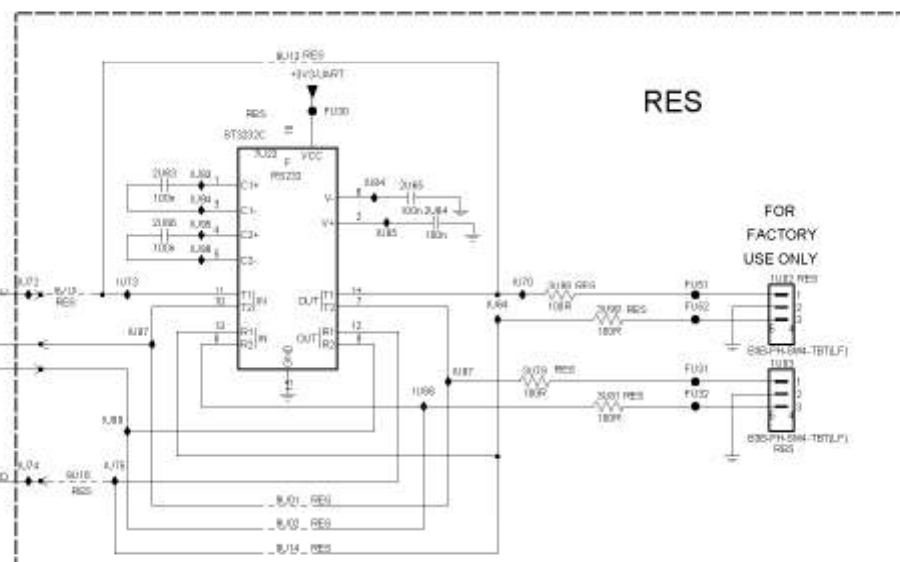
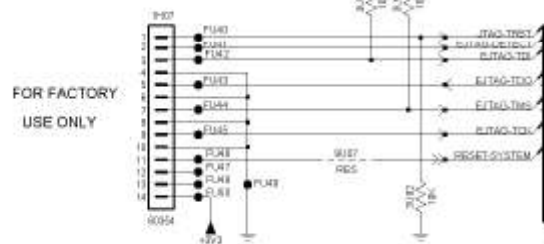
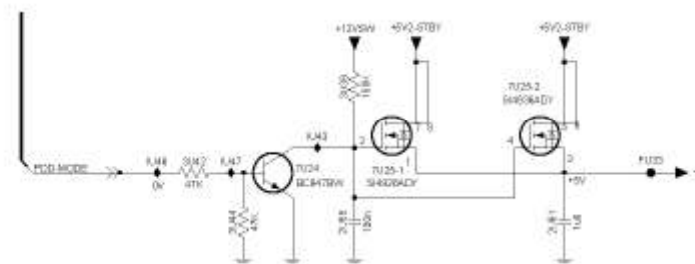
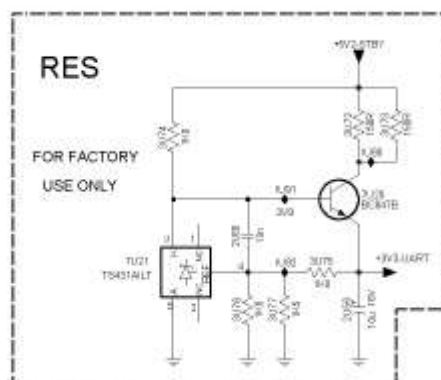


ALL ARE CHIP COMPONENTS EXCEPT 1901,1902,2901,2903,5901,5903,5908,5910,8901.

1901 C 30
1902 E10
1901 F1
1902 F1
1903 F2
1904 C9
1905 C9
1906 P9
1907 F9
1908 B4
1909 B5
1910 B5
1911 B5
1912 B5
1913 B5
1914 C4
1915 C4
1916 D4
1917 D4
1918 D4
1919 D4
1920 F5
1921 F8
1922 F7
1923 ET
1924 F7
1925 F8
1926 F8
1927 E8
1928 D7
1929 D7
1930 D7
1931 D7
1932 D8
1933 C9
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SUPPLY + RS232

SB: 62843 x2
PB: 62853

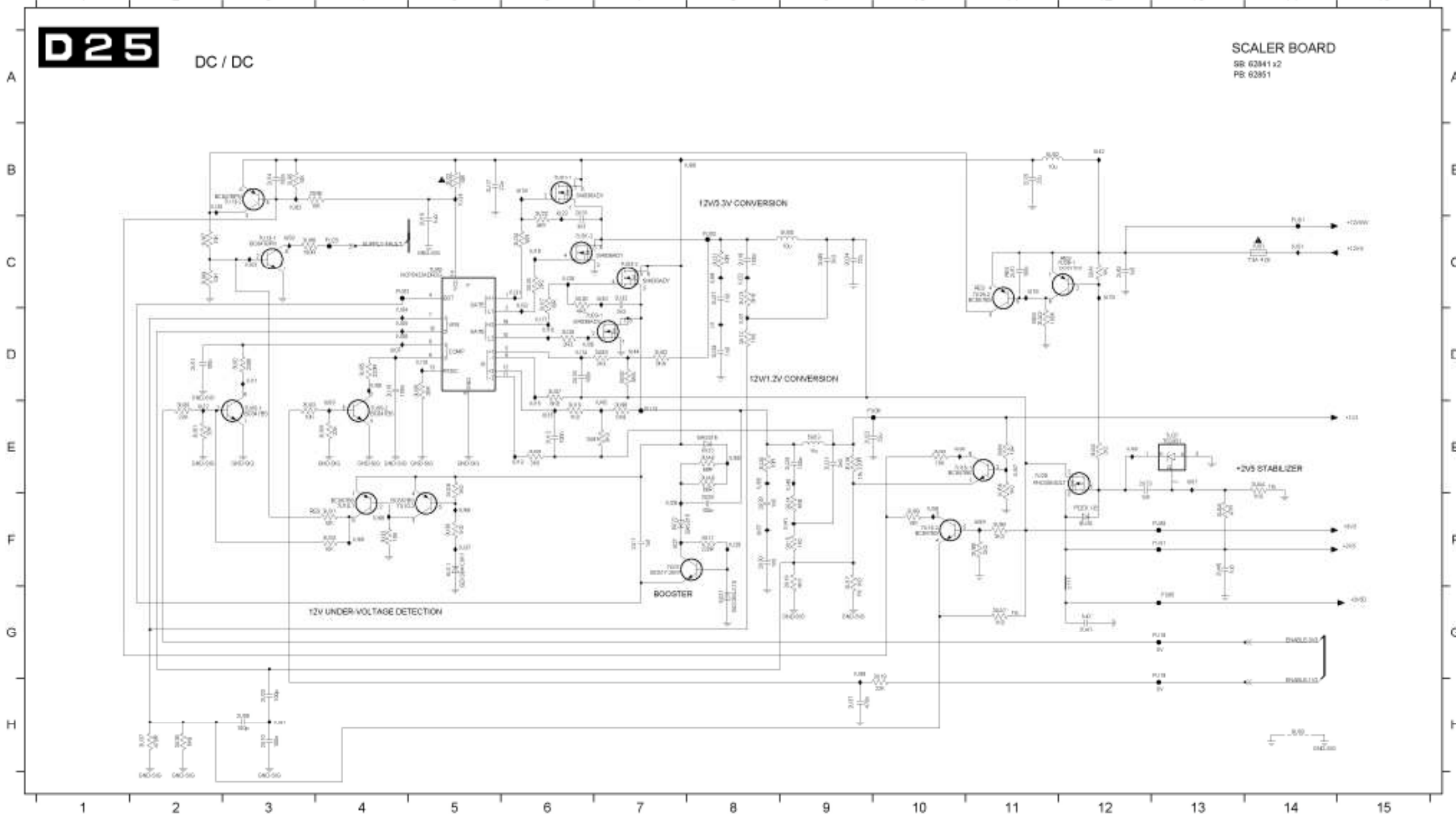


ALL ARE CHIP COMPONENTS EXCEPT 1001

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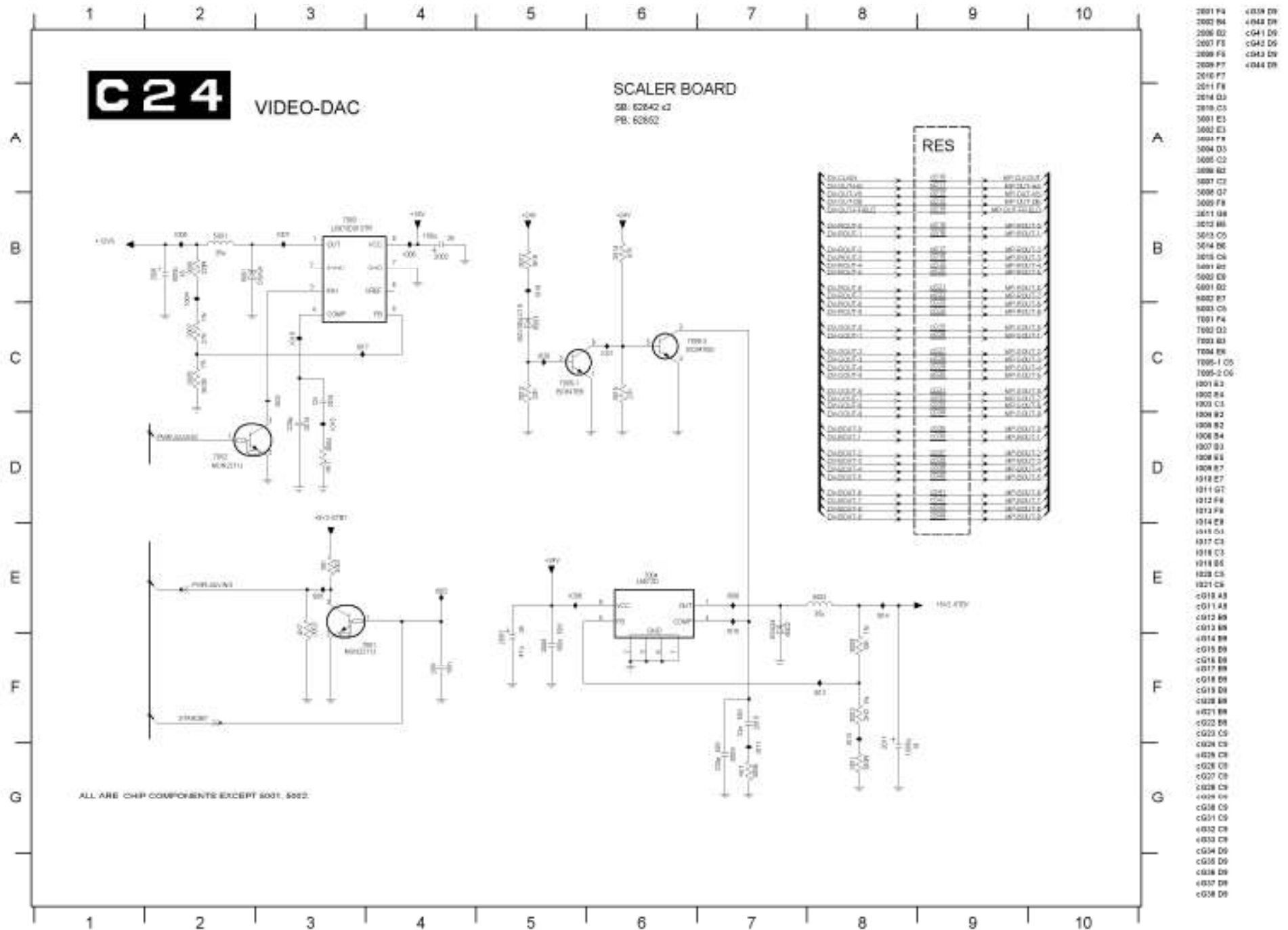
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2017 C16	2018 D4	2022 B9	2028 P6	2032 C12	2038 E11	2010 E8	2017 P8	2024 C6	2036 P11	2088 C2	2062 D11	2088 C9	2028 P5	2082 E16	2012-E18	2082 C4	2019 G15	2084 D4	2013 B5	2028 B2	2027 P7	2027 P8	2088 B9	2082 B3	2079 C12	
2028 B3	2016 C5	2025 D0	2028 D0	2032 C11	2044 E4	2011 F0	2018 E3	2025 C4	2032 F4	2062 D7	2013 F10	2033 E12	2002 B11	2088 C5	2087 F7	2027 E13	2083 C9	2019 G12	2027 D4	2014 D6	2021 D6	2028 F8	2084 C2	2085 E10	2081 C3	2080 E12
2018 B6	2013 B6	2024 C9	2021 B6	2013 E12	2085 D6	2012 D6	2019 G16	2026 C4	2033 B4	2062 D1	2088 F11	2044 E16	2003 B3	2081-E18	2010-E14	2028 B11	2085 D13	2083 C4	2086 D6	2016 B6	2022 C8	2029 C6	2081 P9	2087 E11	2080 F6	2081 B13
2011 F7	2018 D6	2025 B11	2032 C7	2035 C9	2085 D6	2013 C8	2028 E8	2027 C6	2033 D6	2088 B3	2088 F11	2085 F15	2011 P5	2082-E15	2010-E15	2028-E12	2085 D18	2081 C14	2086 D4	2019 E4	2086 C7	2082 D12	2088 P10	2086 P4	2080 B8	
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2013 D2	2028 D9	2027 C9	2014 G12	2011 E2	2085 D7	2015 P9	2022 B6	2028 E5	2046 E11	2087 C2	2087 E5	2086 E8	2022 P7	2082-E17	2010-E13	2028-E11	2087 F12	2083 C3	2085 D5	2017 D8	2028 B5	2021 C6	2084 D7	2085 F11	2081 F6	2080 B8

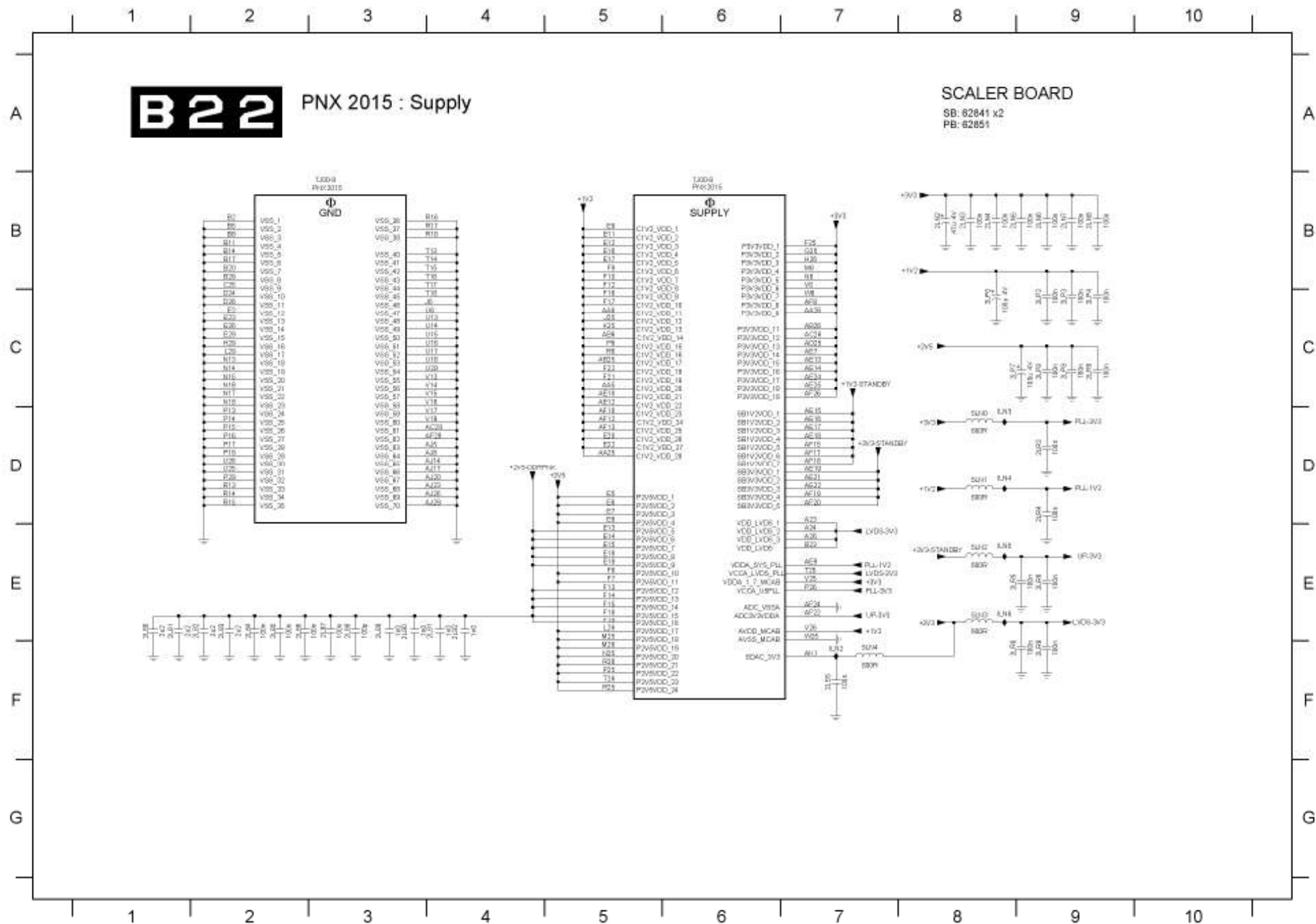


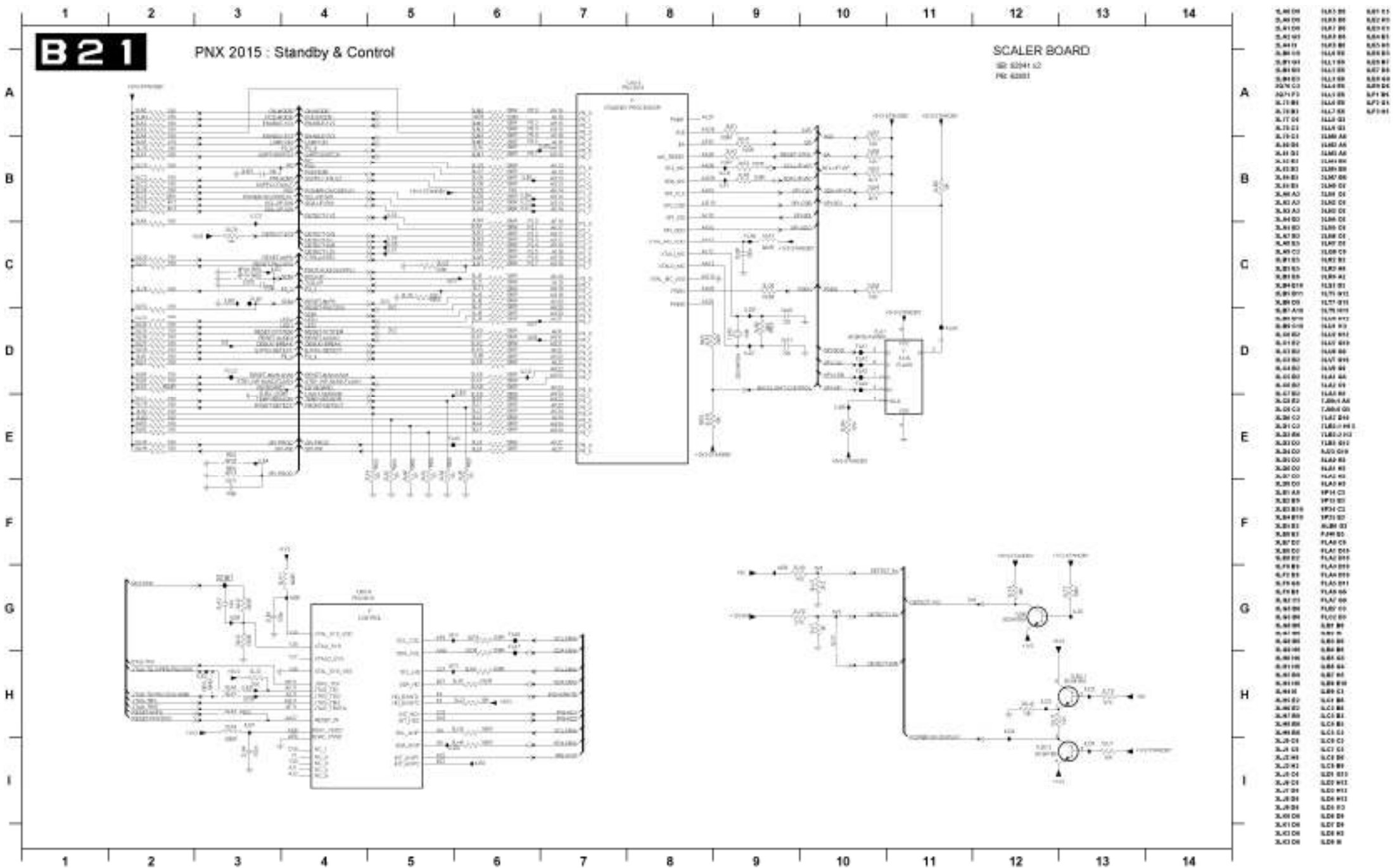
Video-DAC diagram

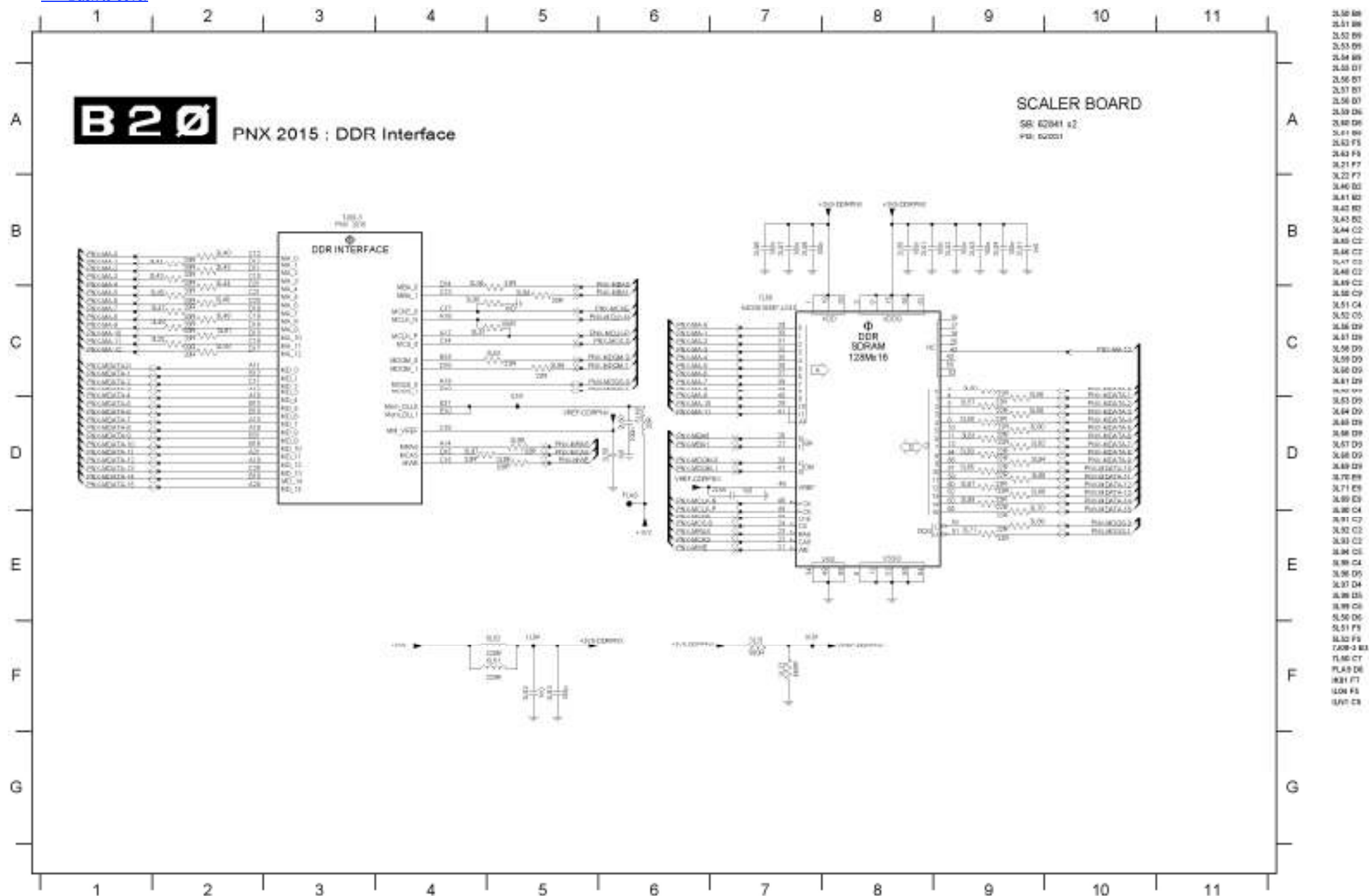
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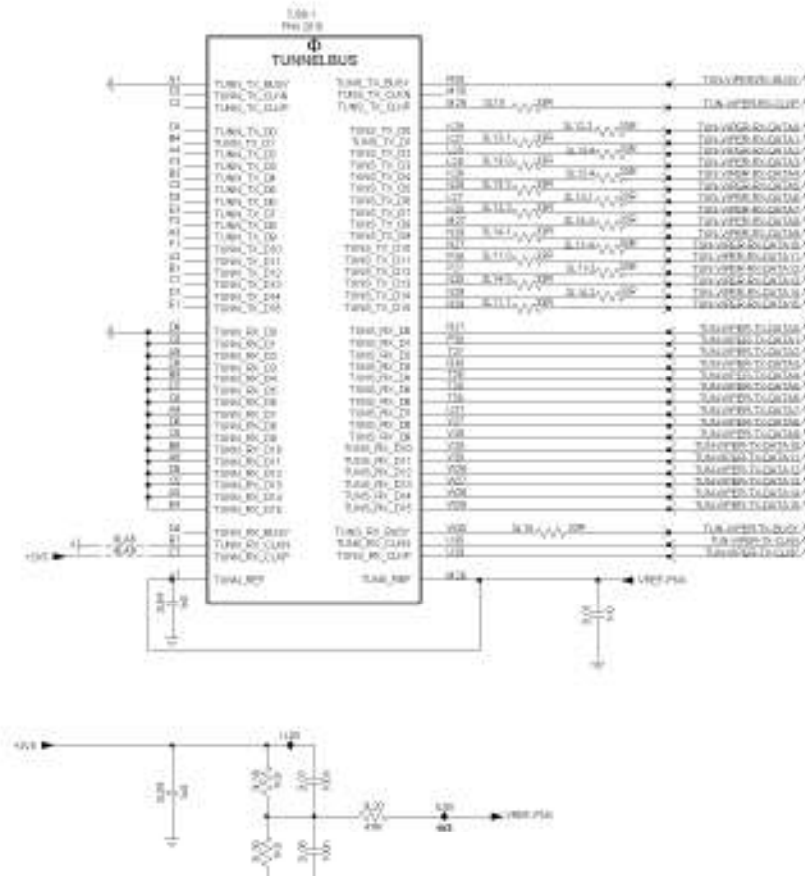
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PNX 2015 : Tunnelbus

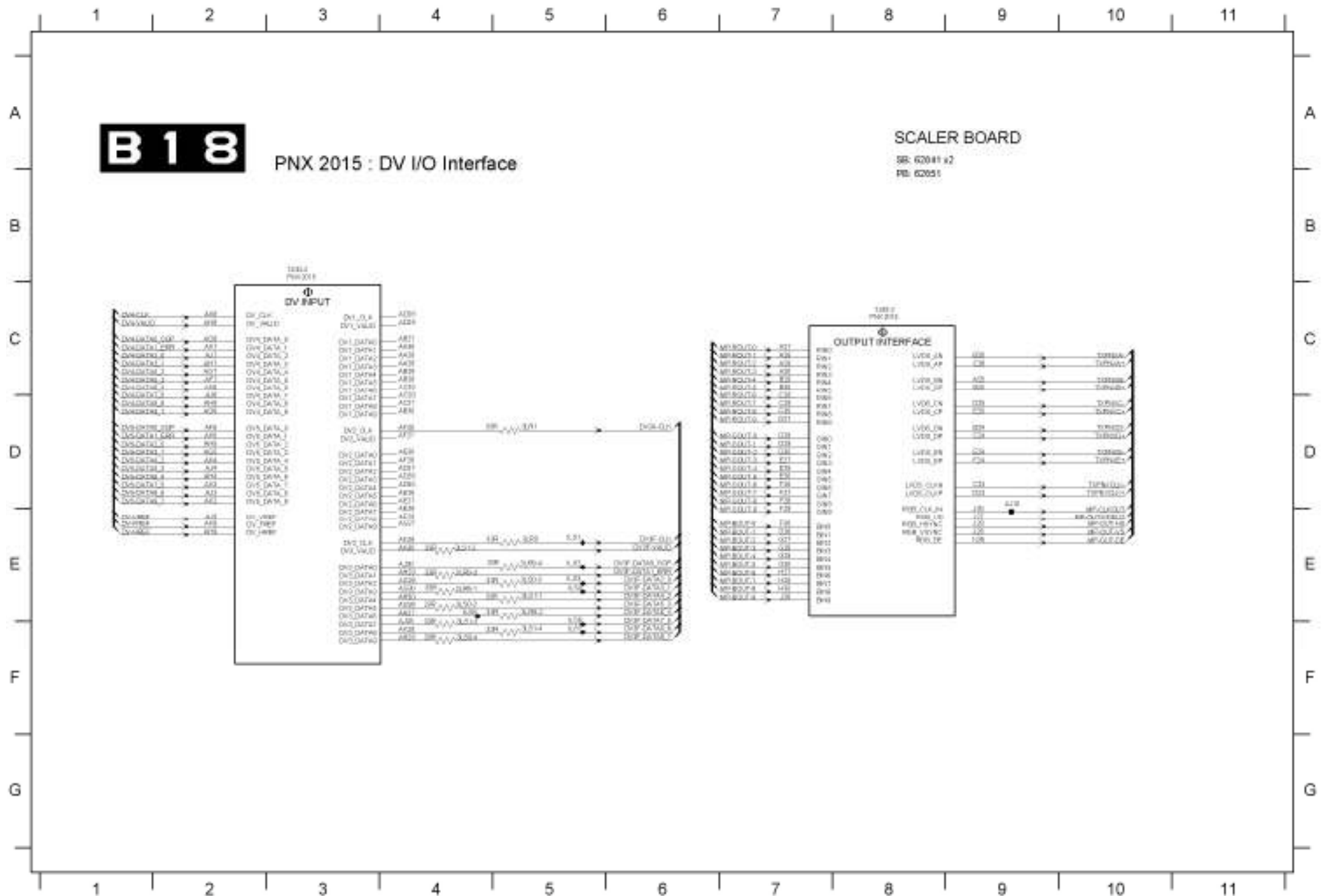
SCALER BOARD

SB: 62841 v2

PB: 62851



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 2L17 F4
 2L80 G4
 2L44 B3
 2L10 B5
 2L11-1 G5
 2L11-2 G5
 2L11-3 G5
 2L11-4 G5
 2L12-1 G5
 2L12-2 B6
 2L12-3 C5
 2L12-4 C5
 2L13-1 C5
 2L13-2 C5
 2L13-3 C5
 2L13-4 C5
 2L14-1 C5
 2L14-2 C5
 2L14-3 C5
 2L14-4 C5
 2L16 B5
 2L20 G4
 2L30 F4
 2L39 G4
 7L90-1 B4
 8L48 F3
 8L48 F3
 8L53 F4
 8L55 G5



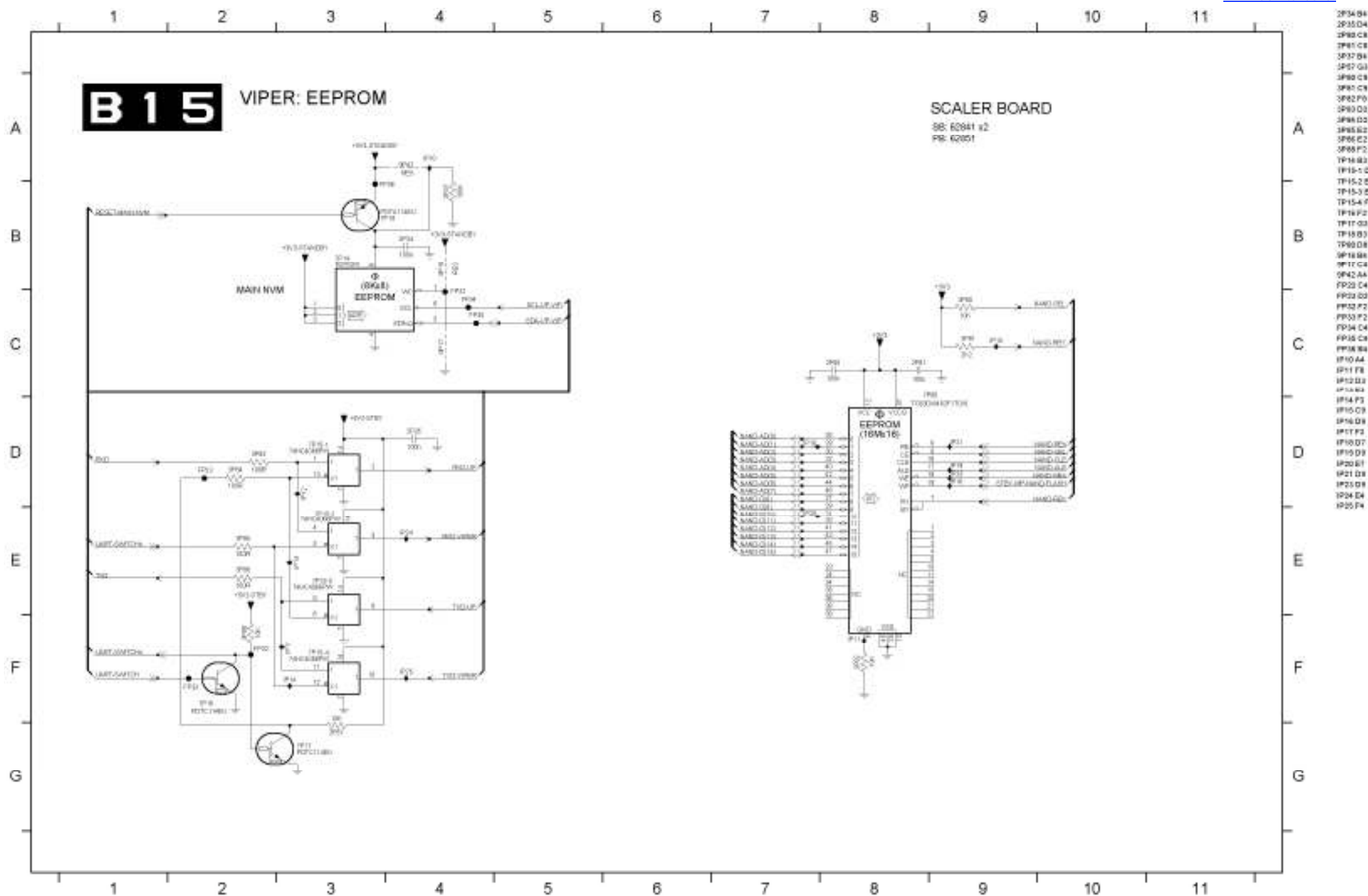
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3L8R1 D6
3L8R-1 E4
3L8R-2 83
3L8R-3 84
3L8R-4 E3
3L8R-2 E4
3L8R-3 85
3L8R-4 F4
3L8R1 85
3L8R-2 E4
3L8R-3 F4
3L8R-4 F0
TJ08-2 C8
TJ08-4 80
A/T019
L01 E3
L02 E3
L03 80
L04 89
L06 E3
L07 F3
L08 84

MISCELLANEOUS

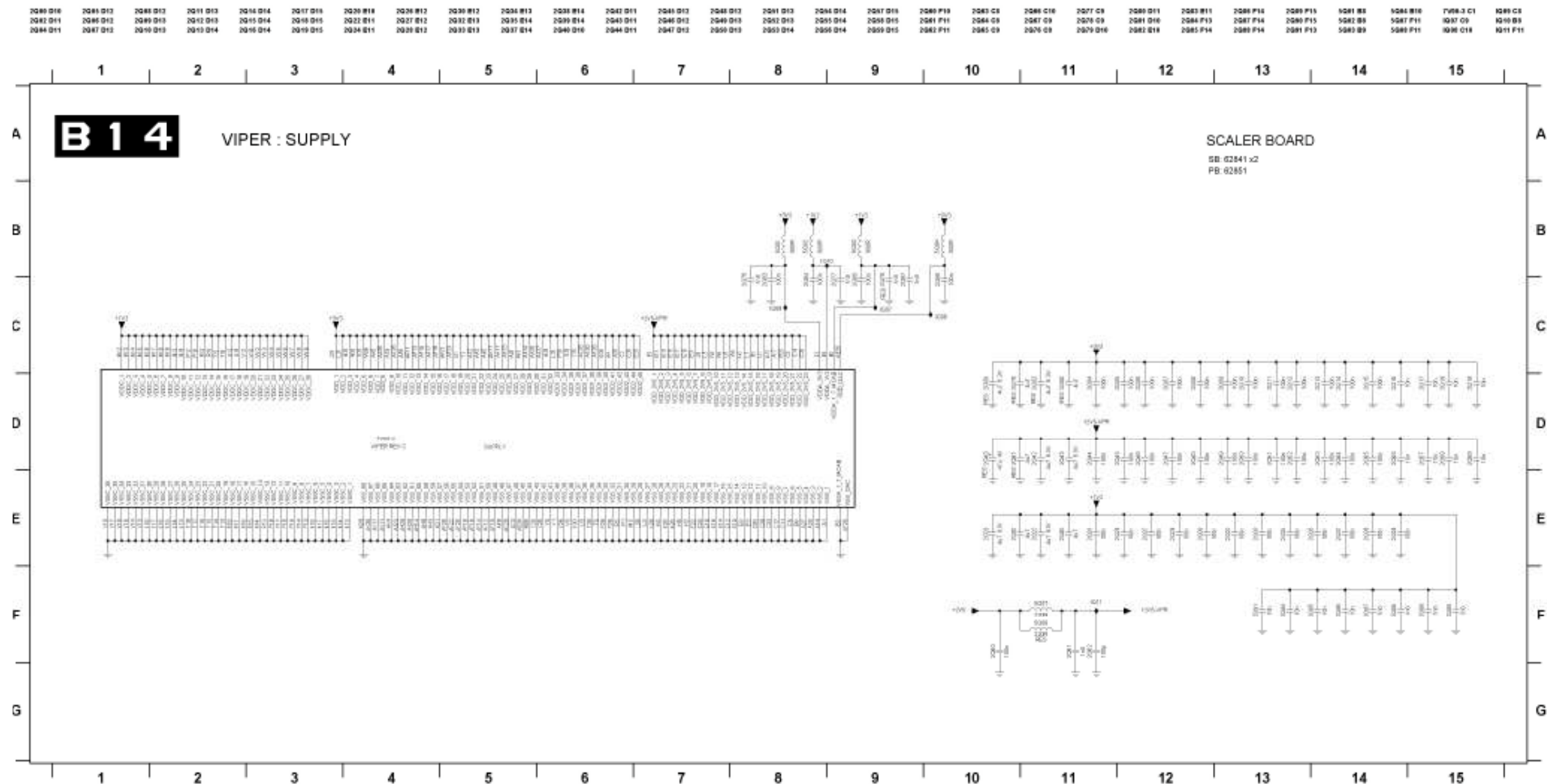
SB: 62841 x2
PB: 62851



- 1402 E7
1M01 D7
2M00 E7
2M01 F6
2M03 E6
2M04 E5
2M06 D3
2M07 D1
2M09 B2
2M02 E2
2M03 B5
2M04 B5
3411 D5
3412 D4
3M00 E2
3M02 E2
3M00 D7
3M01 E5
3M02 E6
3M04 F7
3M01 C2
3M02 D1
5M00 E7
6M10 C1
7411 D6
7M01 F2
7M05 B2
7M06 B4
7M11 D2
9M09 D2
F401 E7
F402 E7
F403 E7
F404 E7
F405 E7
F406 D7
F407 F7
FM50 B5
FM51 C1
FM52 C2
FM53 D2
FM54 D1
FM56 E5
FM57 E6
FM58 E5
FM60 F4
IM04 D5
IM26 E2
IM36 E2
IM58 F3
IM29 D3



VIPER:supply diagram



SCALER BOARD

SEE ADVERT 22
PER ADVERT

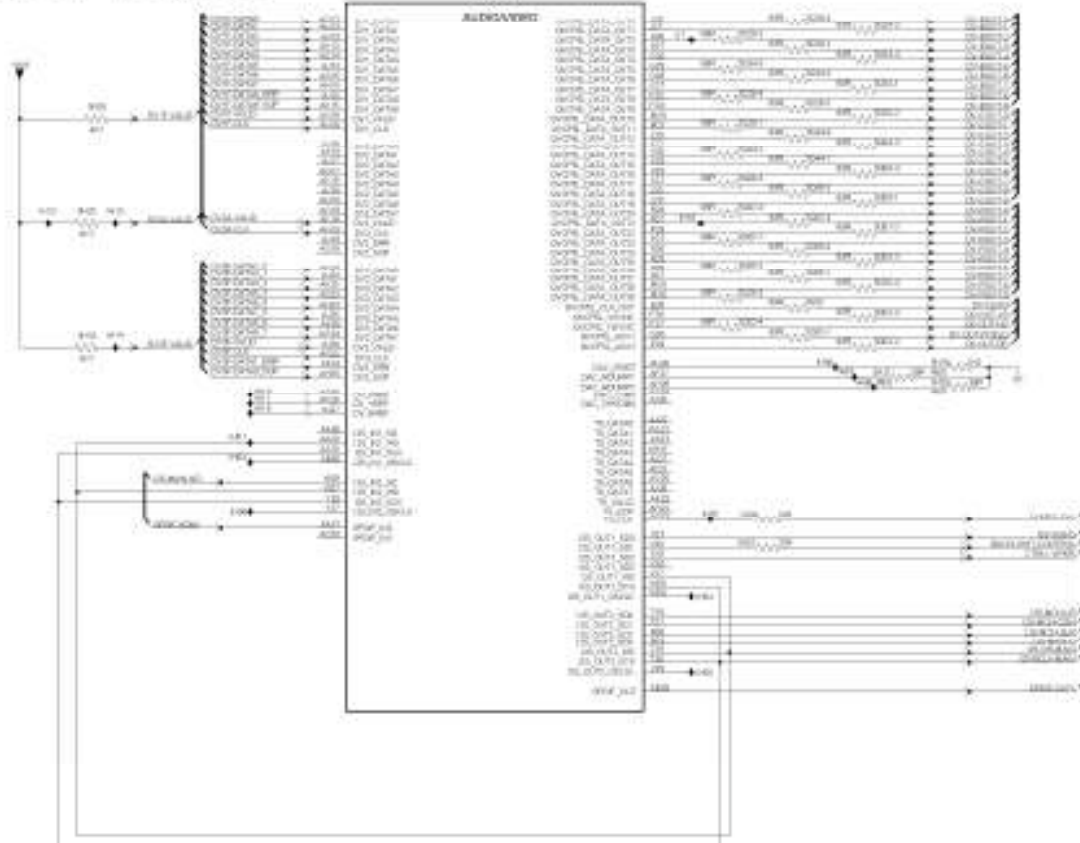
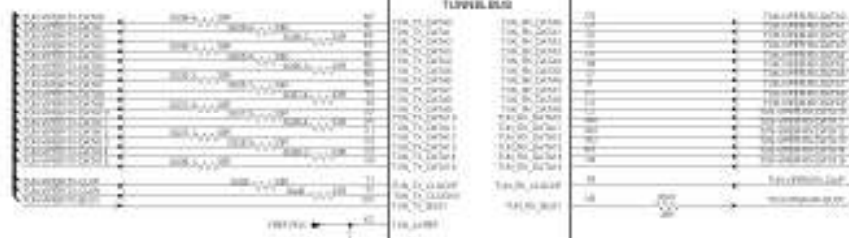
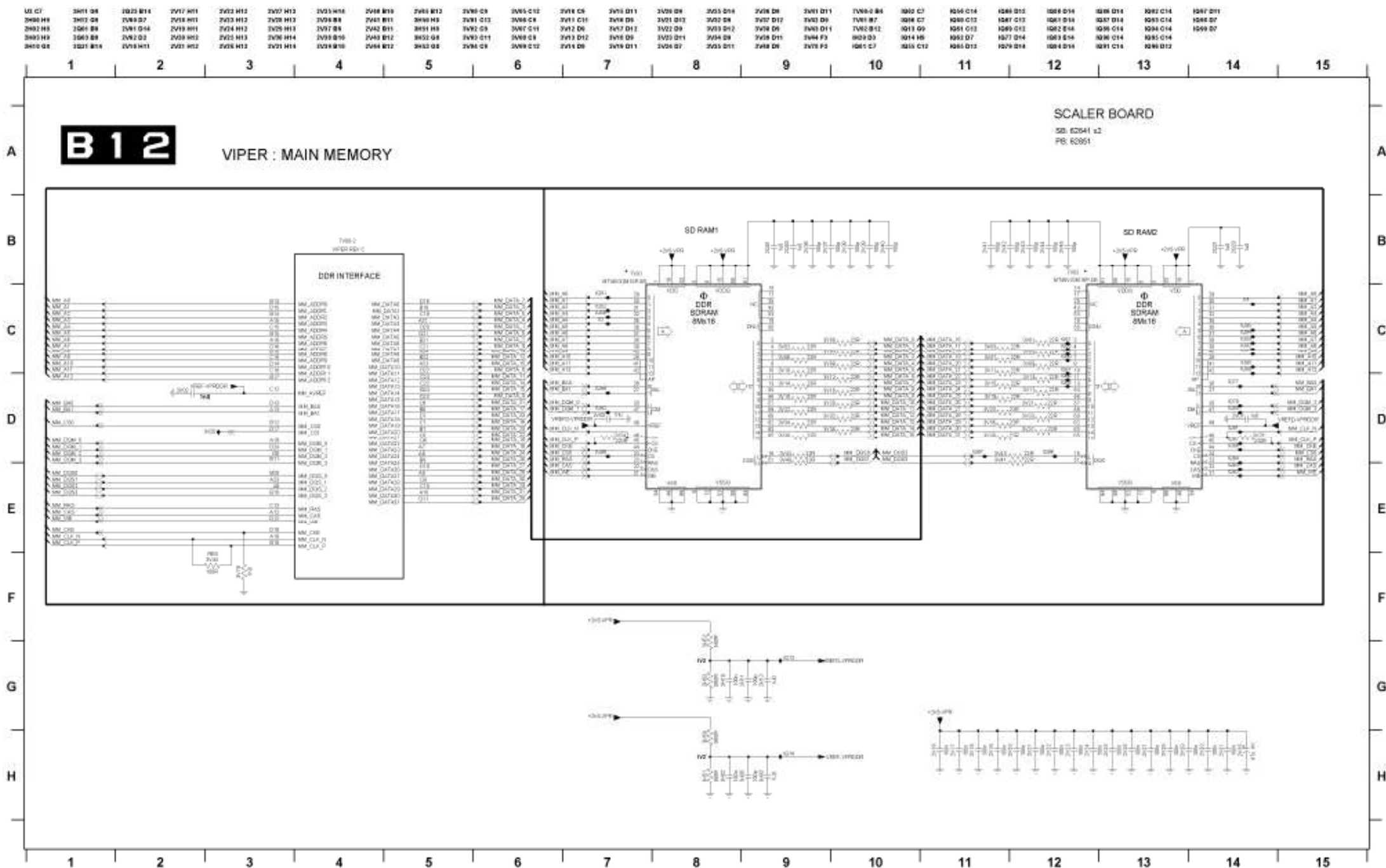


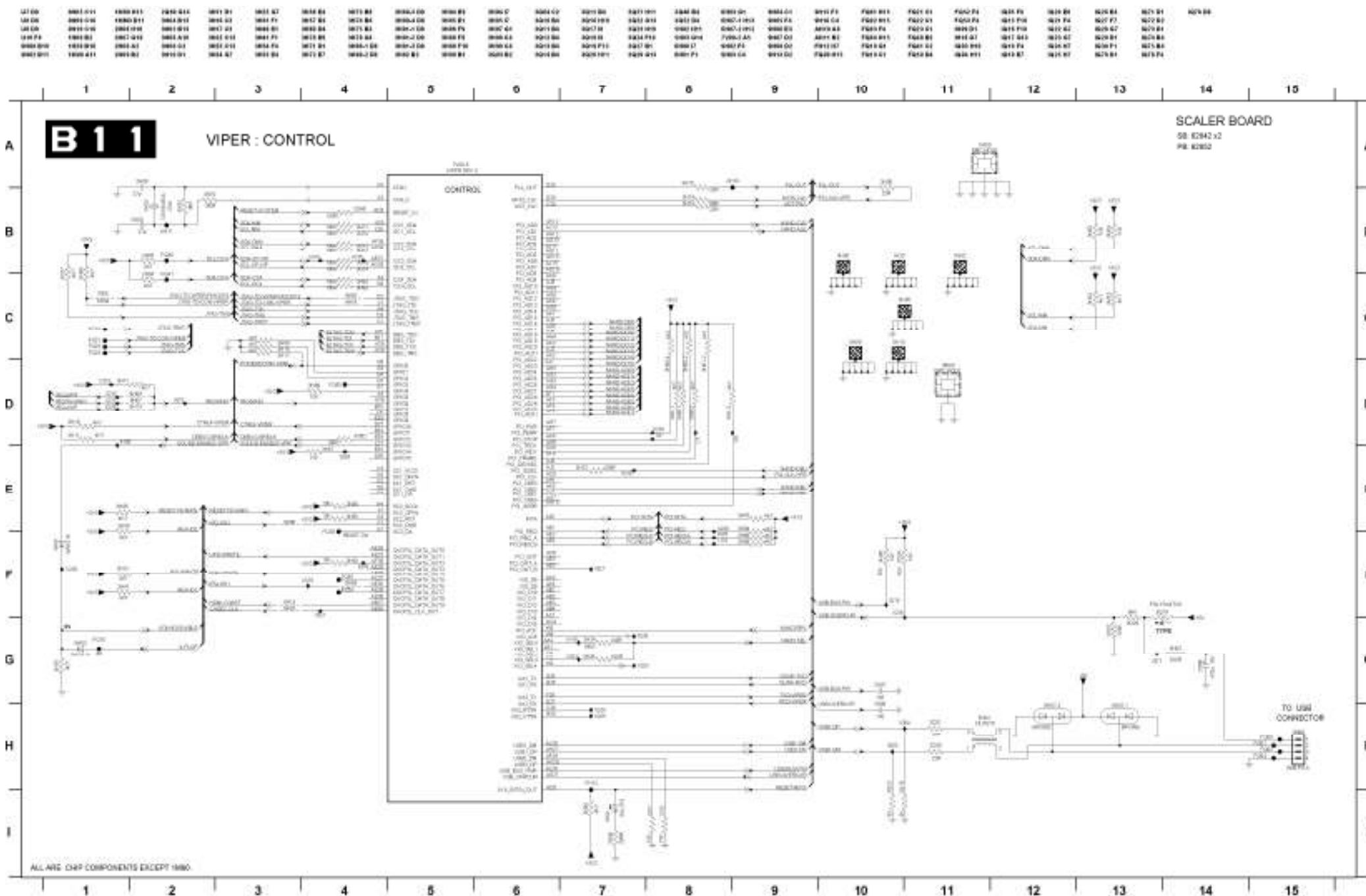
Table 1
continued

FLORIAN B. SCHULZ


$$1 + 3$$

Main memory diagram



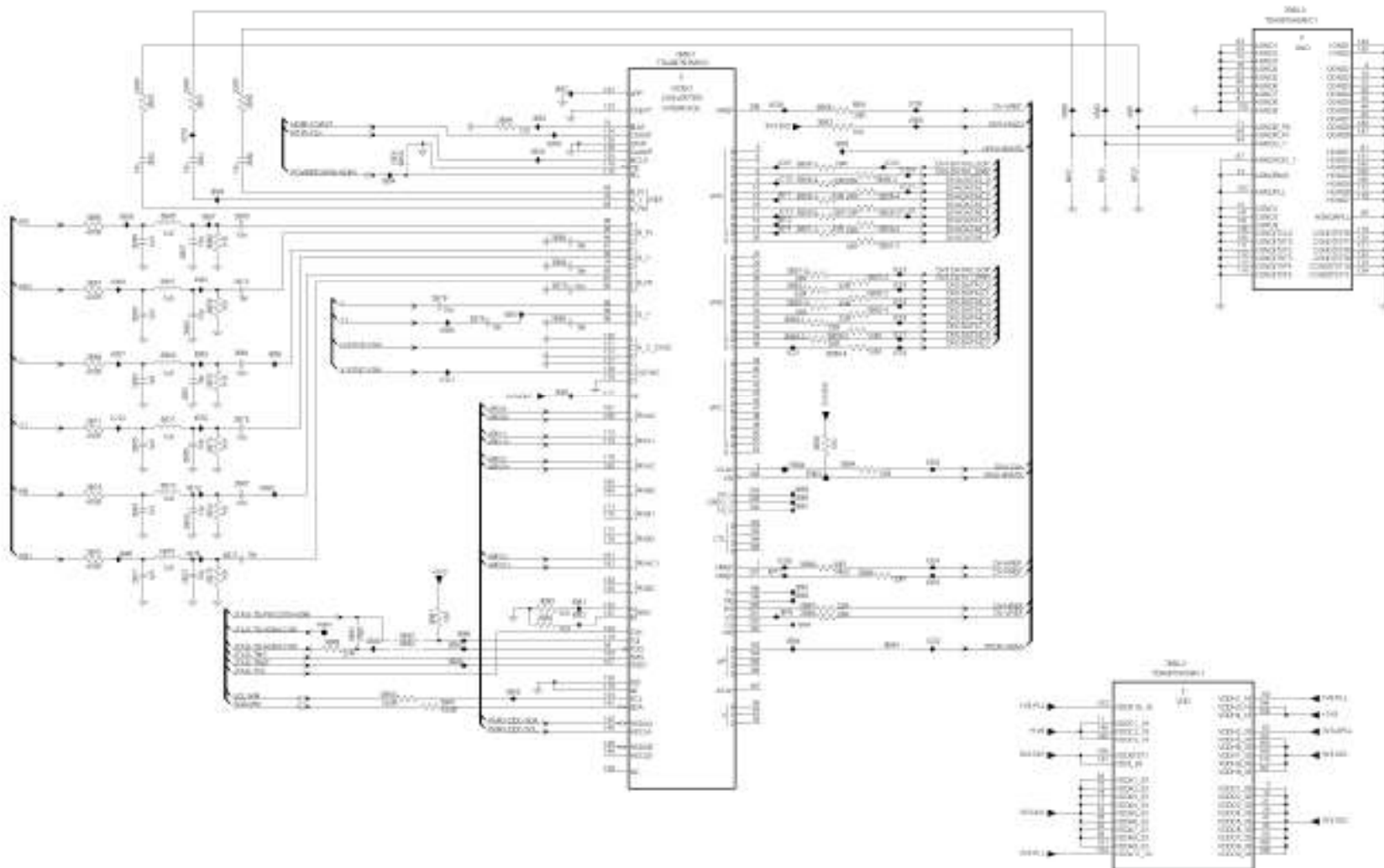


A10

HDMI : I/O + CONTROL

SCALER BOARD

90-0342 v2
90-03502

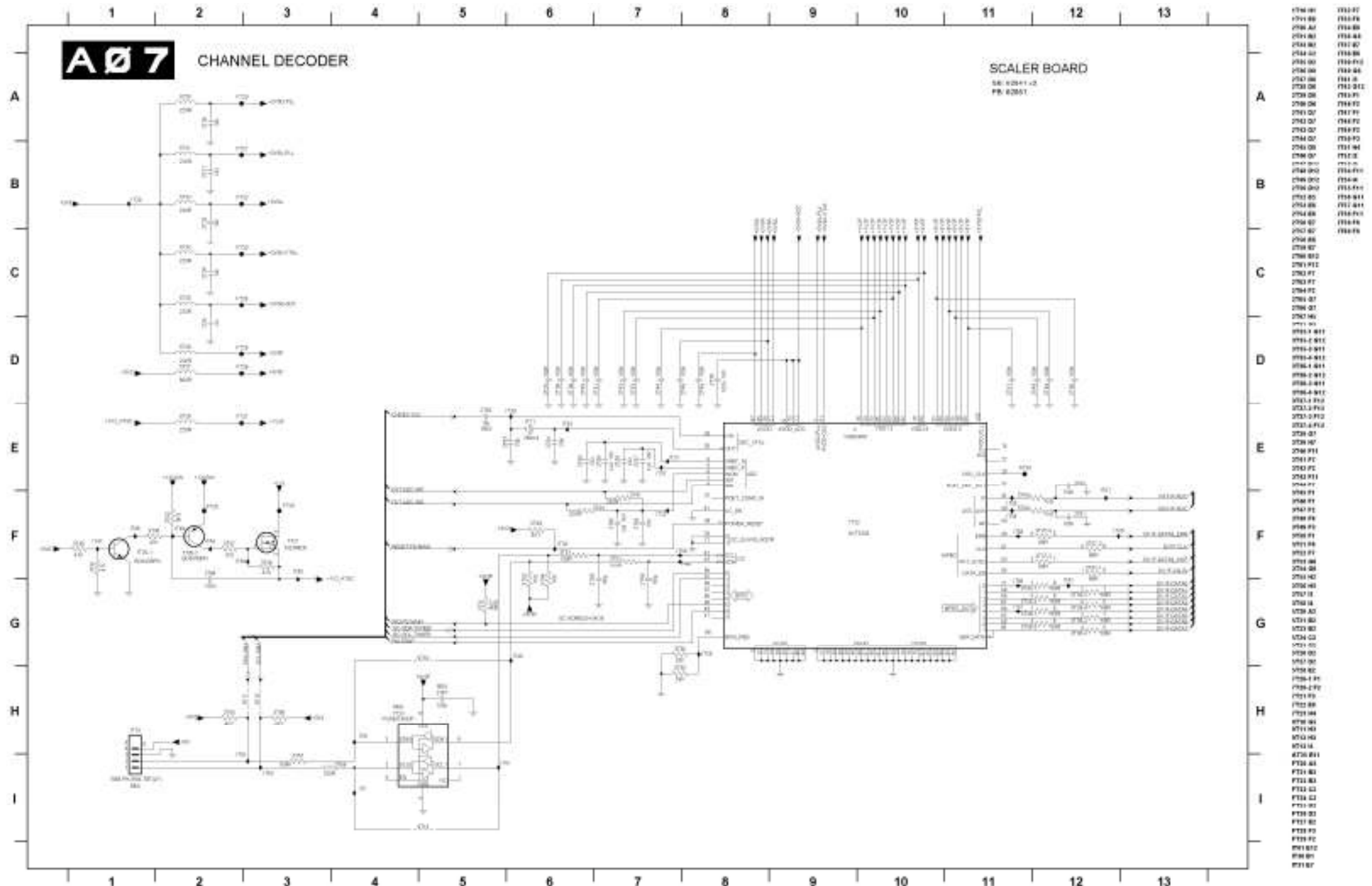


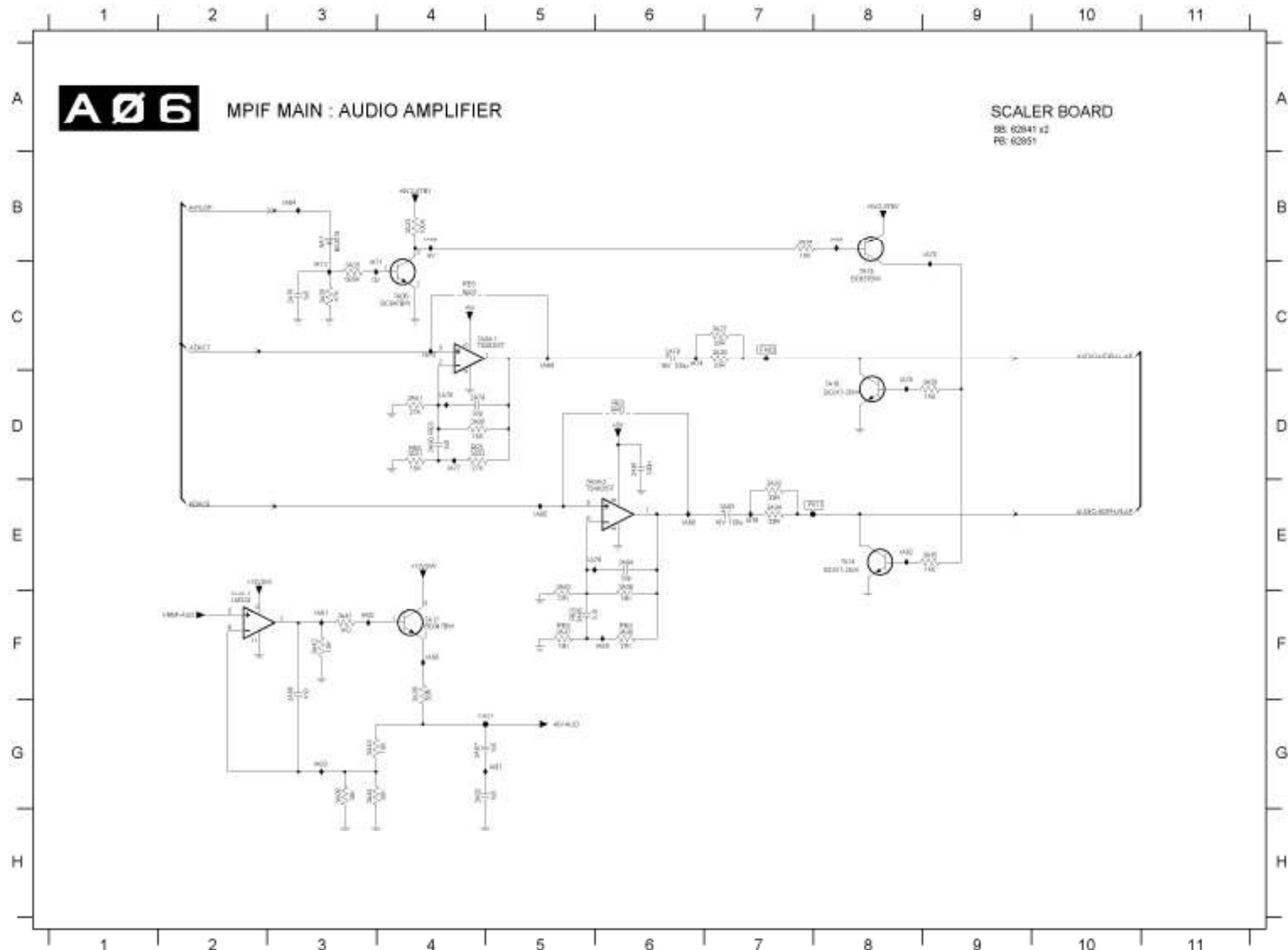
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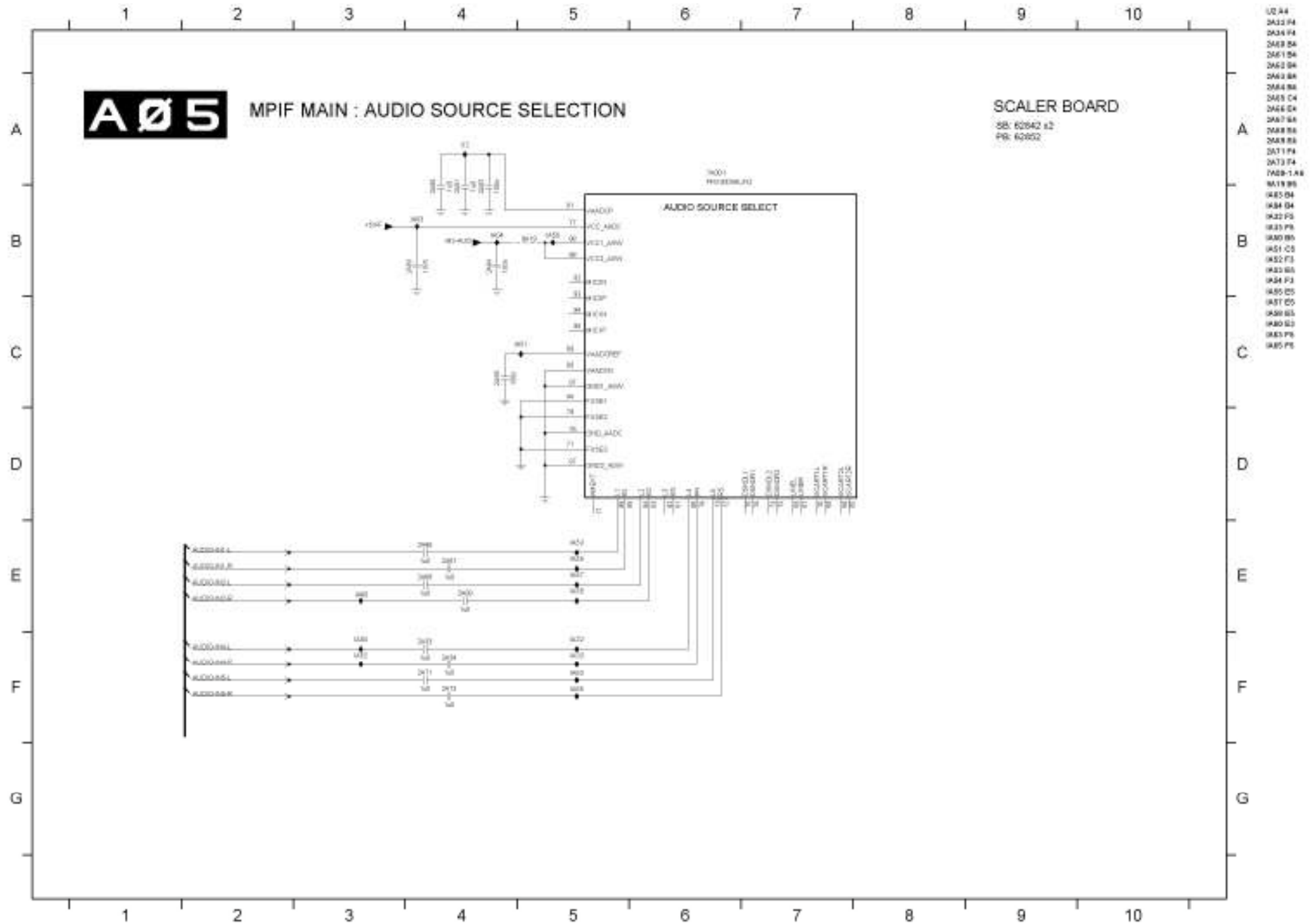
Main tuner diagram



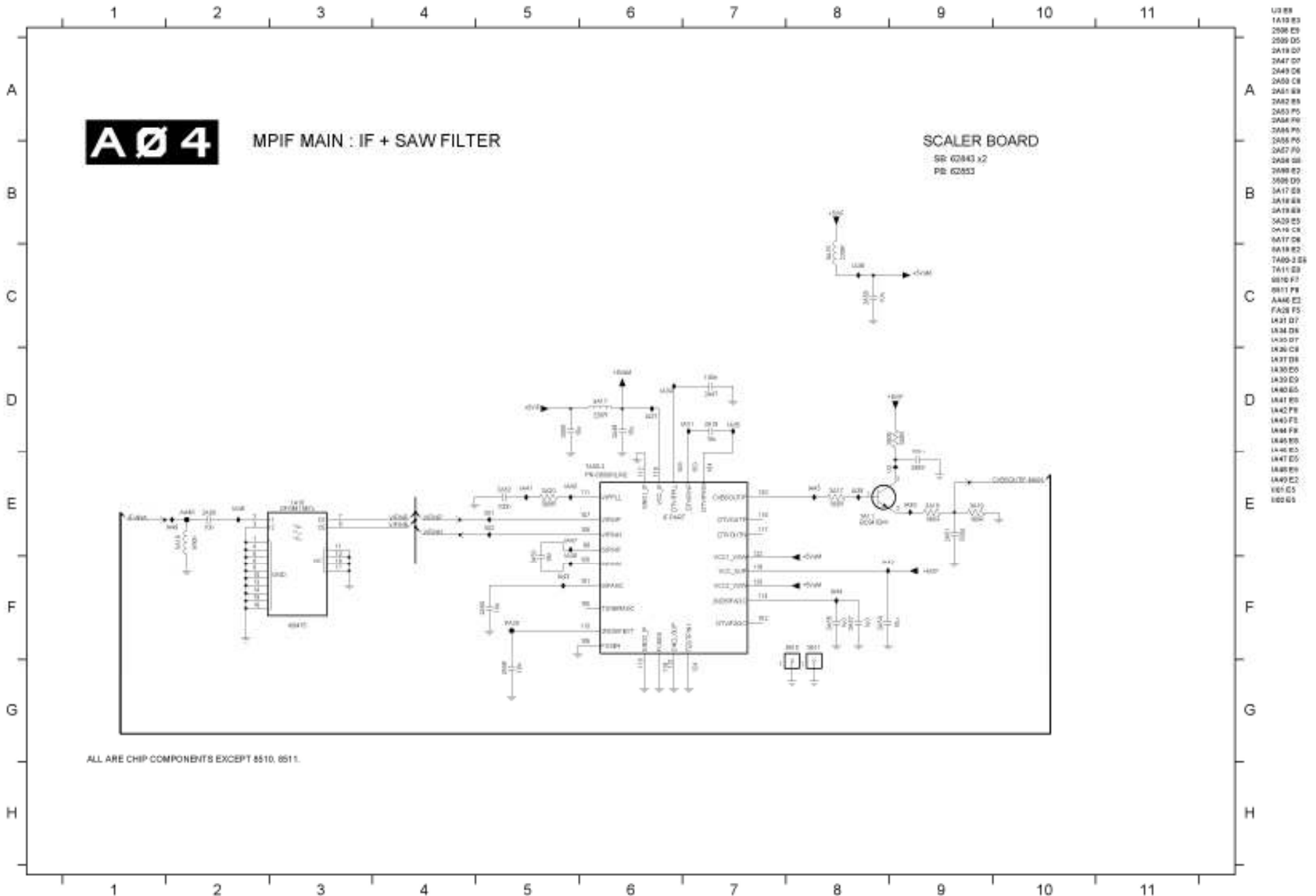




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2A07 G4
2A02 G4
2A23 G4
2A24 H7
2A25 C3
2A26 C3
2A27 C7
2A28 C7
2A29 D8
2A28 D4
2A31 D4
2A32 D6
2A33 E7
2A34 E7
2A35 E3
2A36 E8
2A37 F8
2A38 F8
2A39 F4
2A41 F2
2A42 F3
2A43 G3
2A44 G3
2A51 D8
2A52 F8
2A11 E2
2A04-1 C4
2A04-2 E5
2A09-2 F2
2A08 C4
2A14 E8
2A15 C8
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2A17 F6
2A01 C4
2A02 D6
2A21 G5
2A02 C7
2A11 E5
2A55 F4
2A56 E6
2A57 E8
2A73 D3
2A72 C2
2A73-1 C4
2A74 C8
2A75 D8
2A76 D4
2A77 D4
2A78 E7
2A79 E5
2A80 F6
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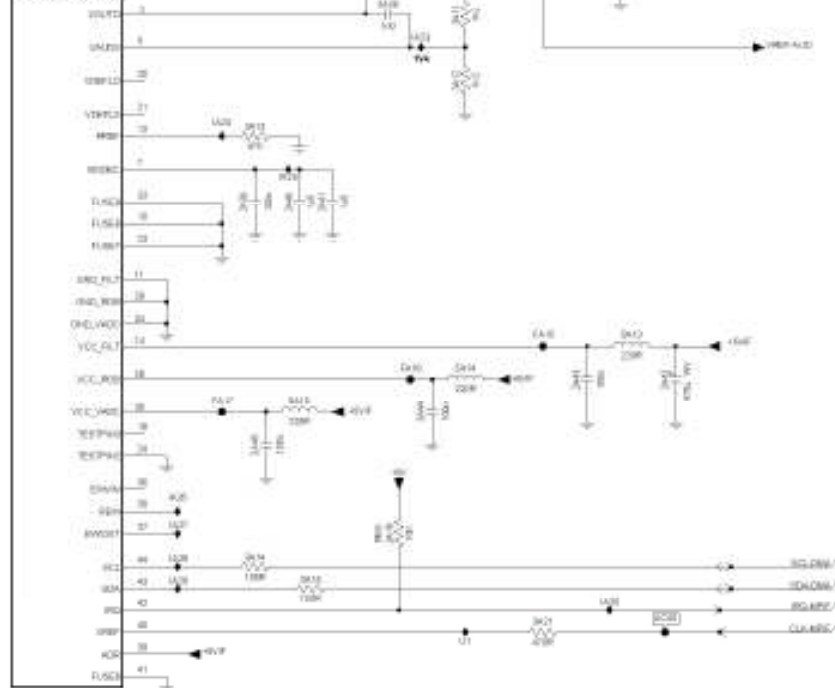
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A03

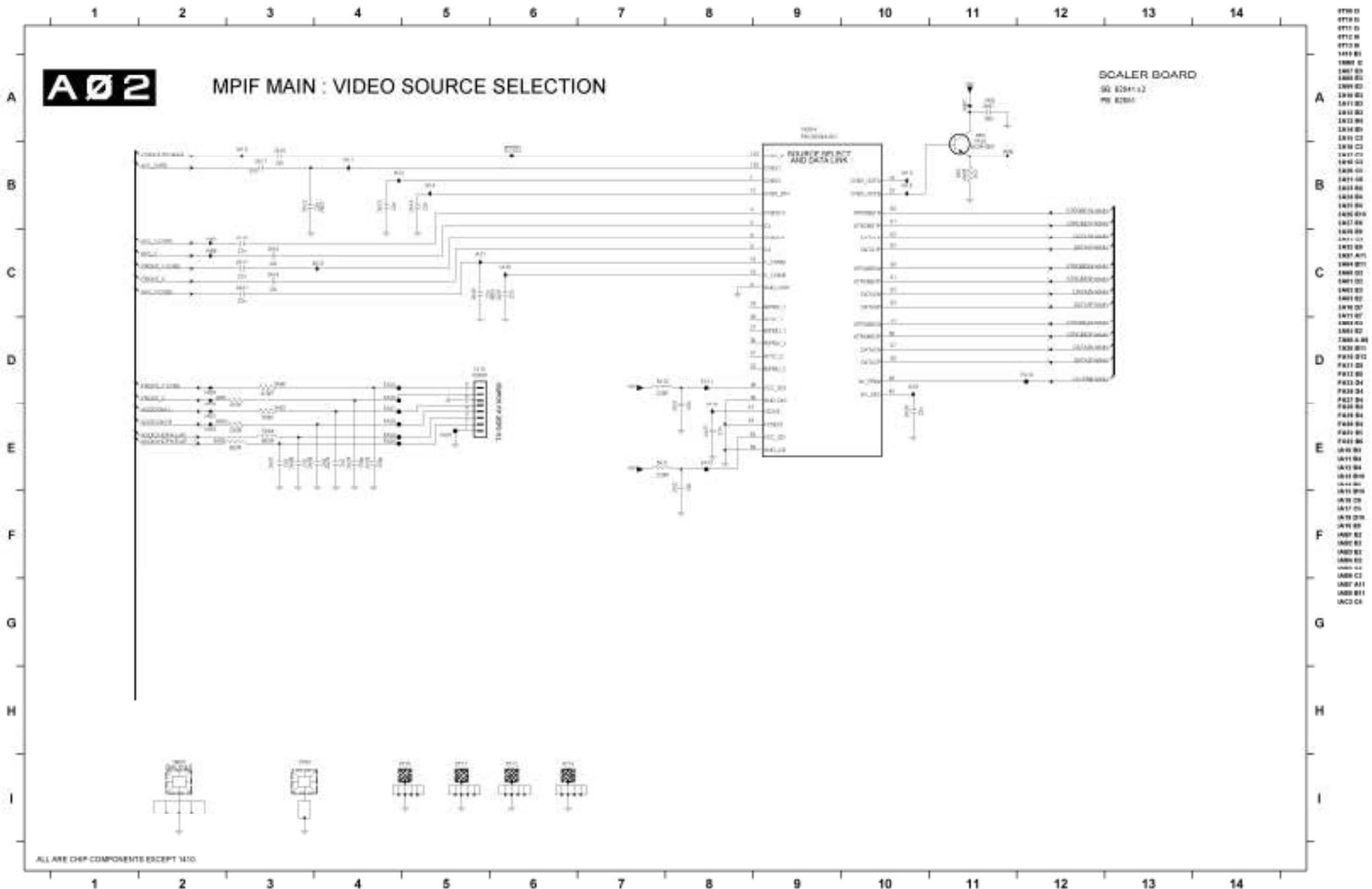
MPIF MAIN : SUPPLY

SCALER BOARD

SB: 82842 v2
PB: 92652TABLE
PINOUTS/AVAILMPIF-SUPPLY
ENV & CONTROL

U1 G5
2A35 B8
2A37 B8
2A38 C5
2A38 D4
2A38 D4
2A41 D5
2A42 E5
2A43 E7
2A44 B3
2A45 E4
2A18 D5
2A11 C5
2A12 C5
2A13 D4
2A14 F4
2A15 F4
2A16 F5
2A21 G6
2A12 A7
2A13 E7
2A14 E3
2A15 E4
2A28-1 B8
2A18 B8
2A15 D6
AC45 G7
FA13 A6
FA14 B7
FA16 B8
FA16 E5
FA17 E4
K20 B5
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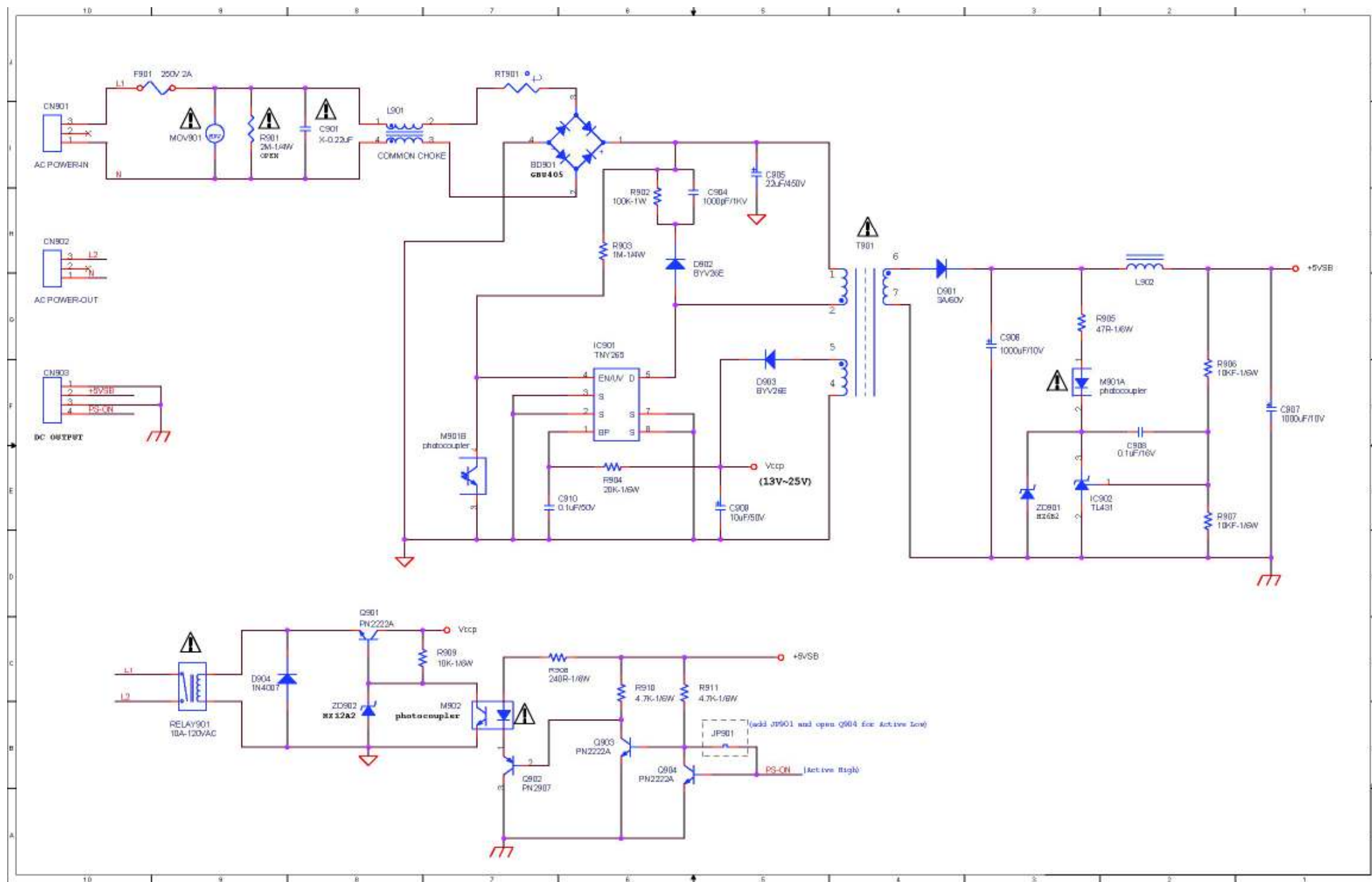
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Power down control board diagram

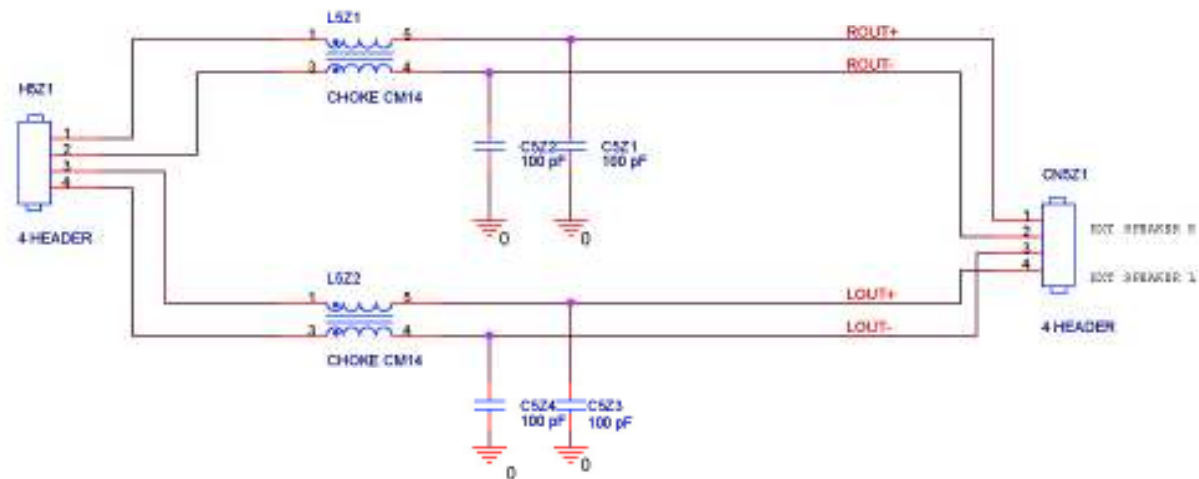
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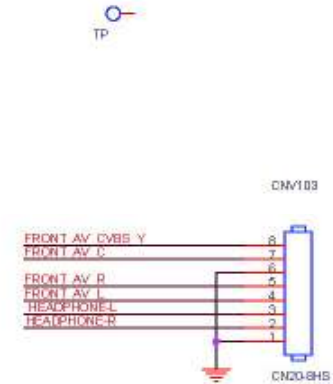
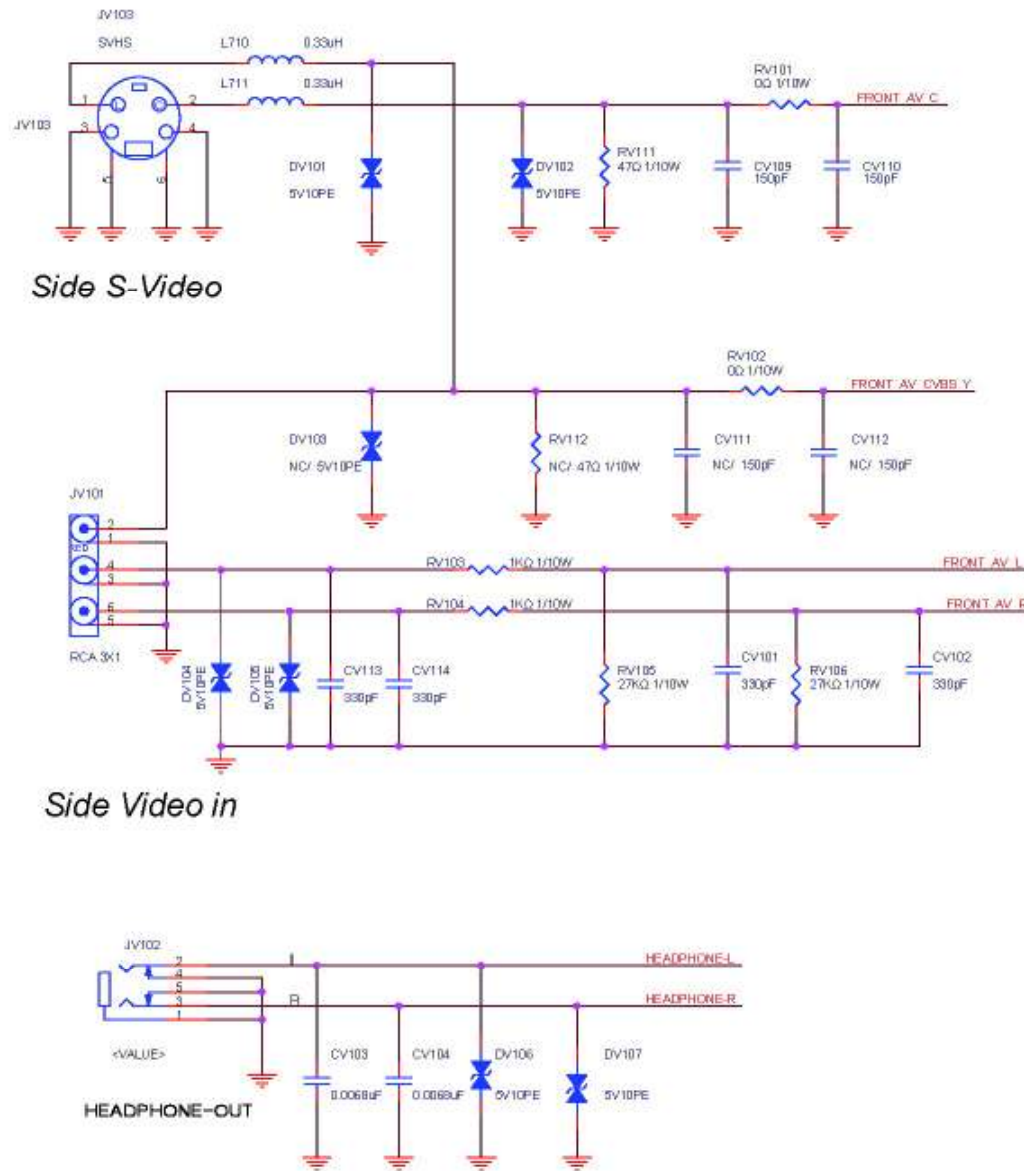


Audio output diagram

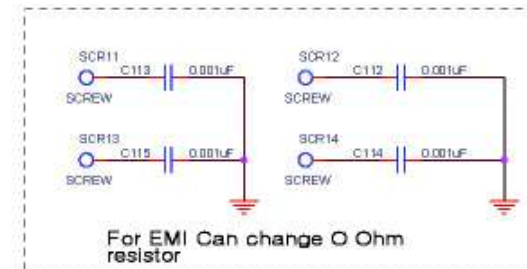
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AUDIO OUTPUT FILTER

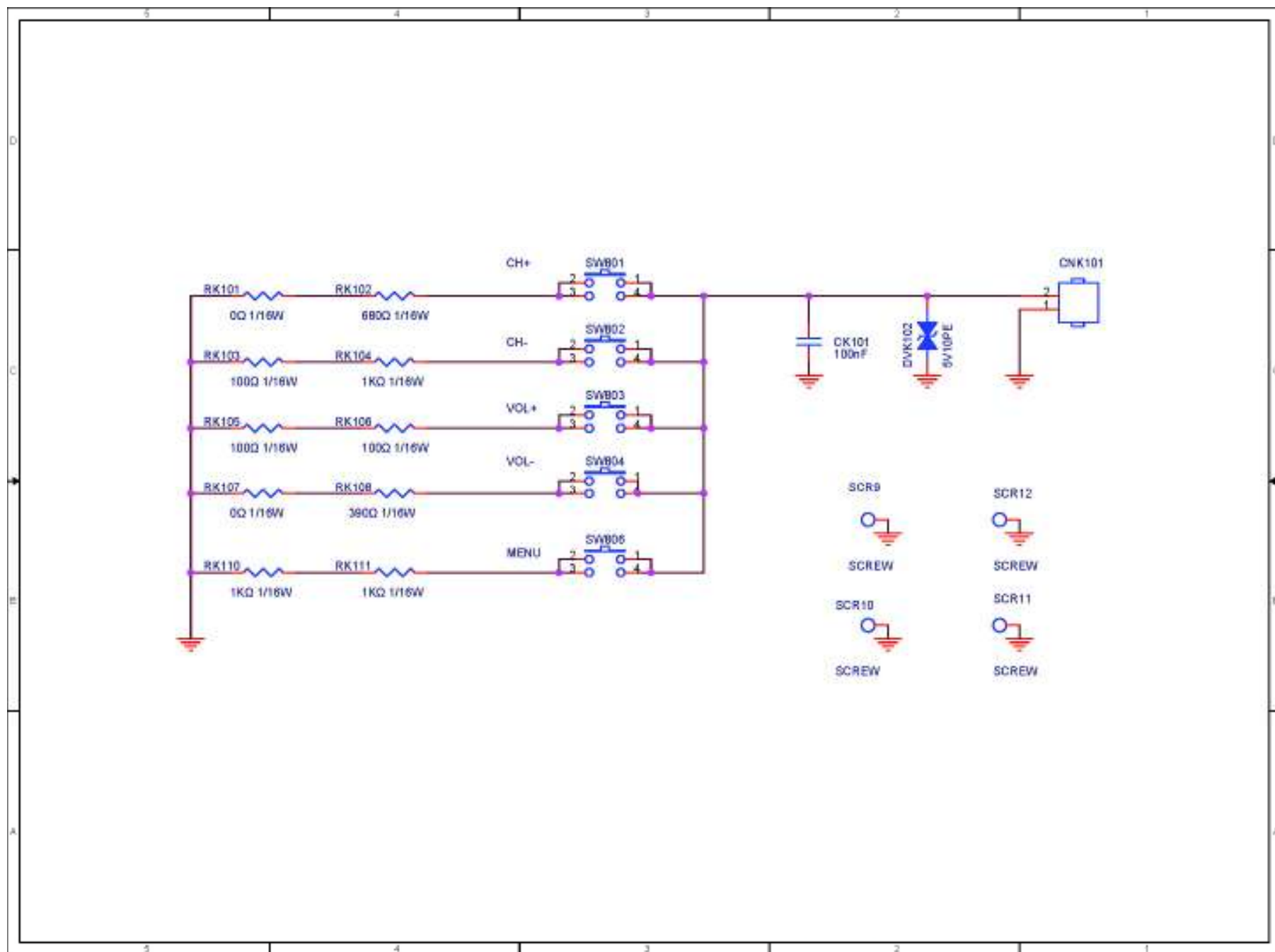


From main board



Key control diagram

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B

A

D

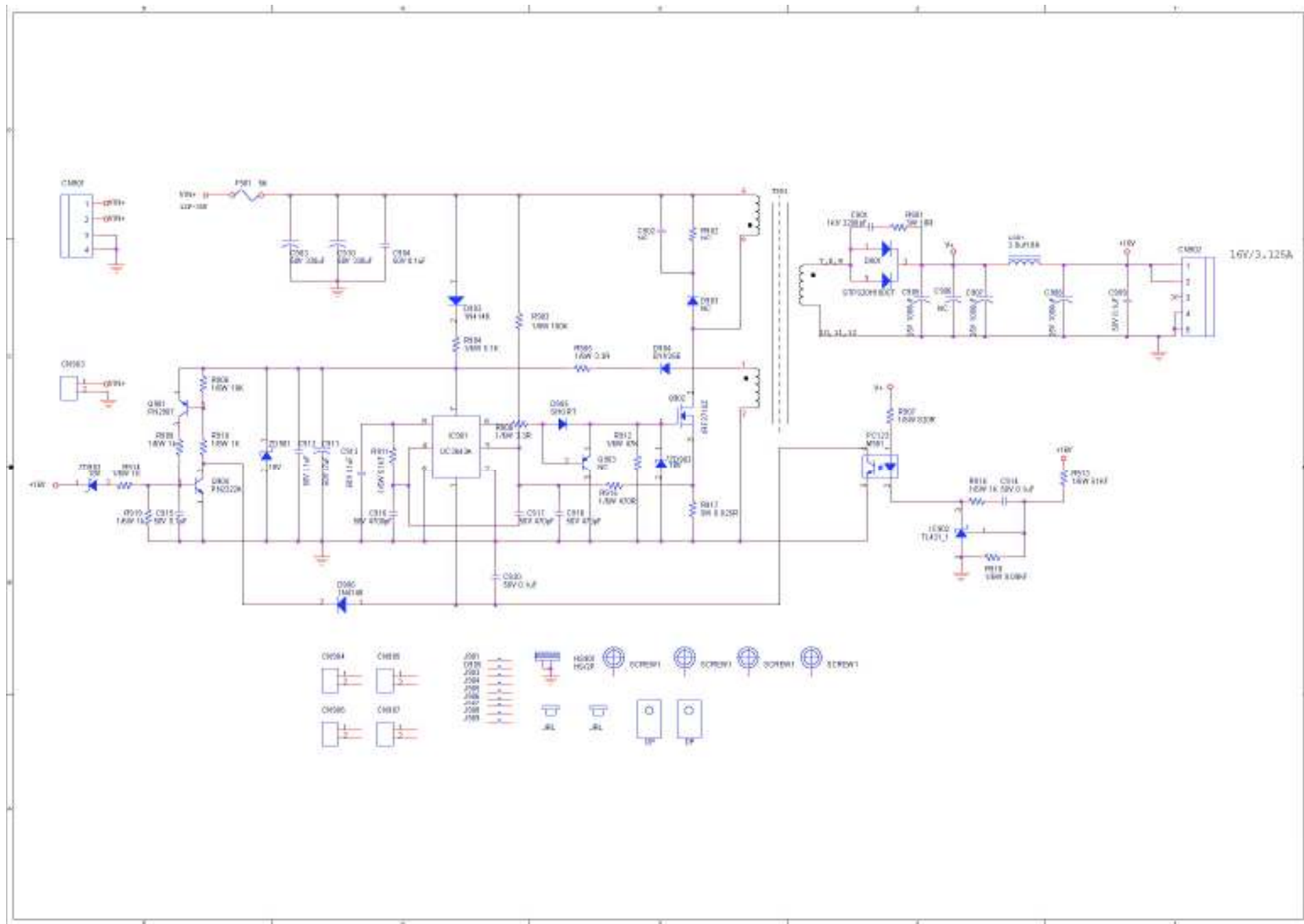
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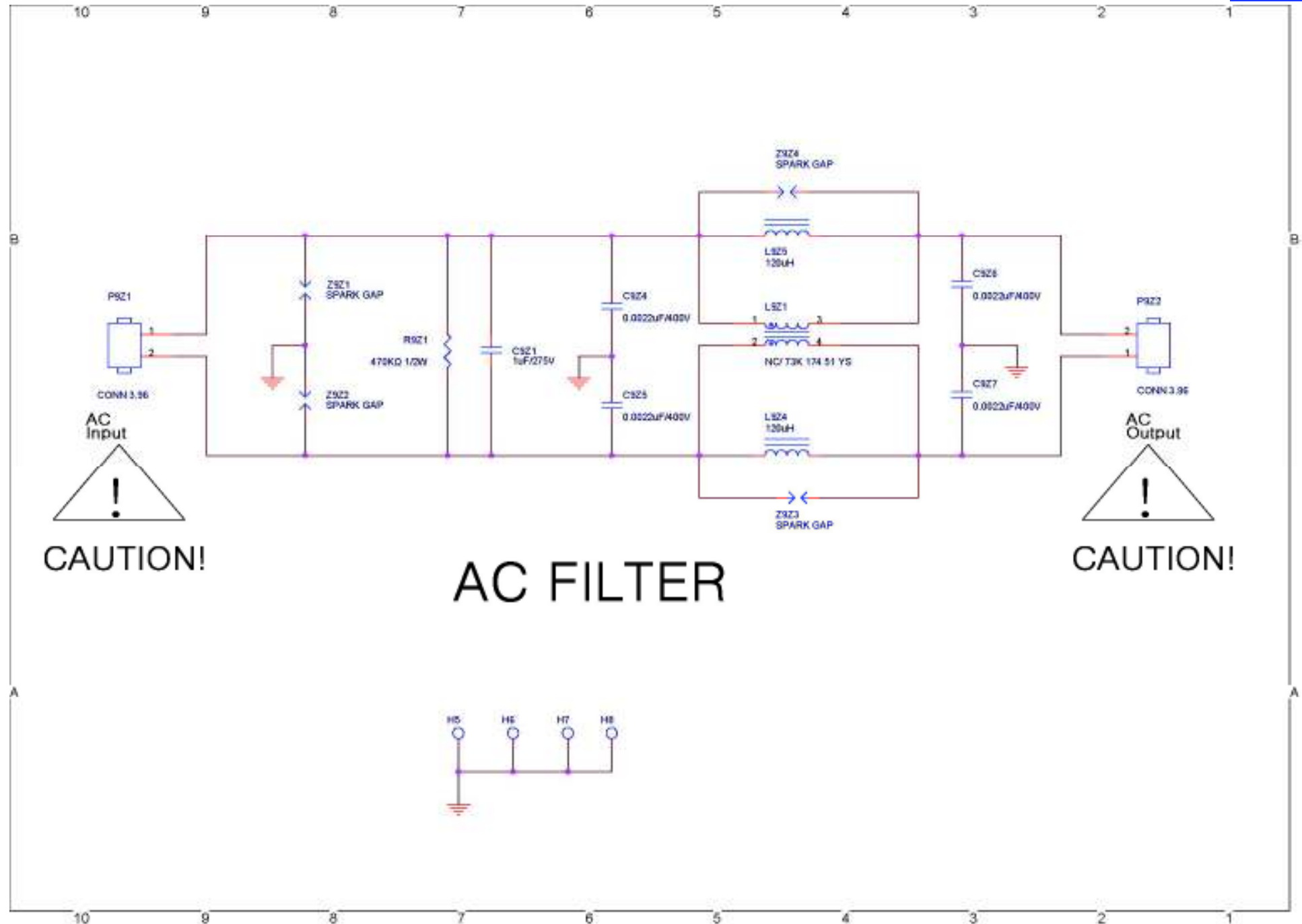
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A

OFPC diagram

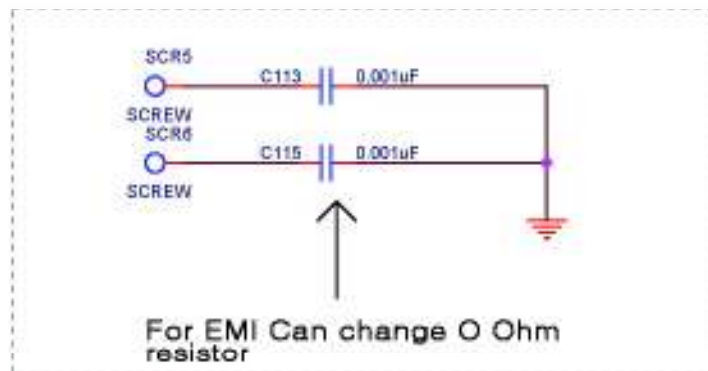
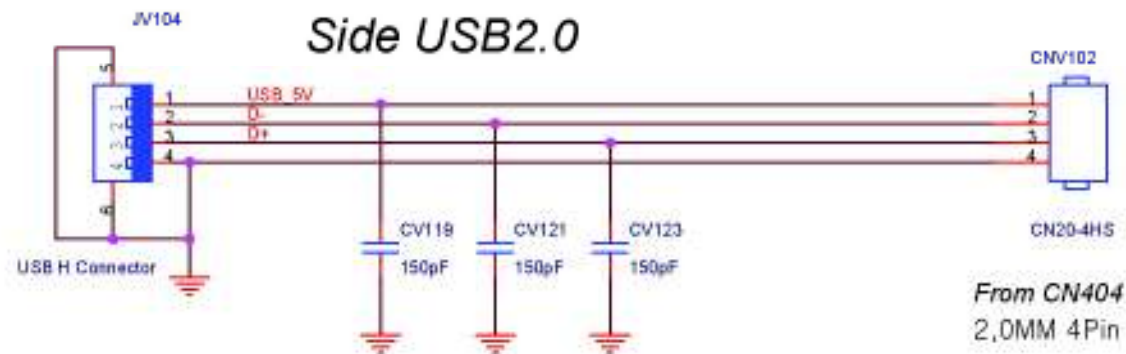
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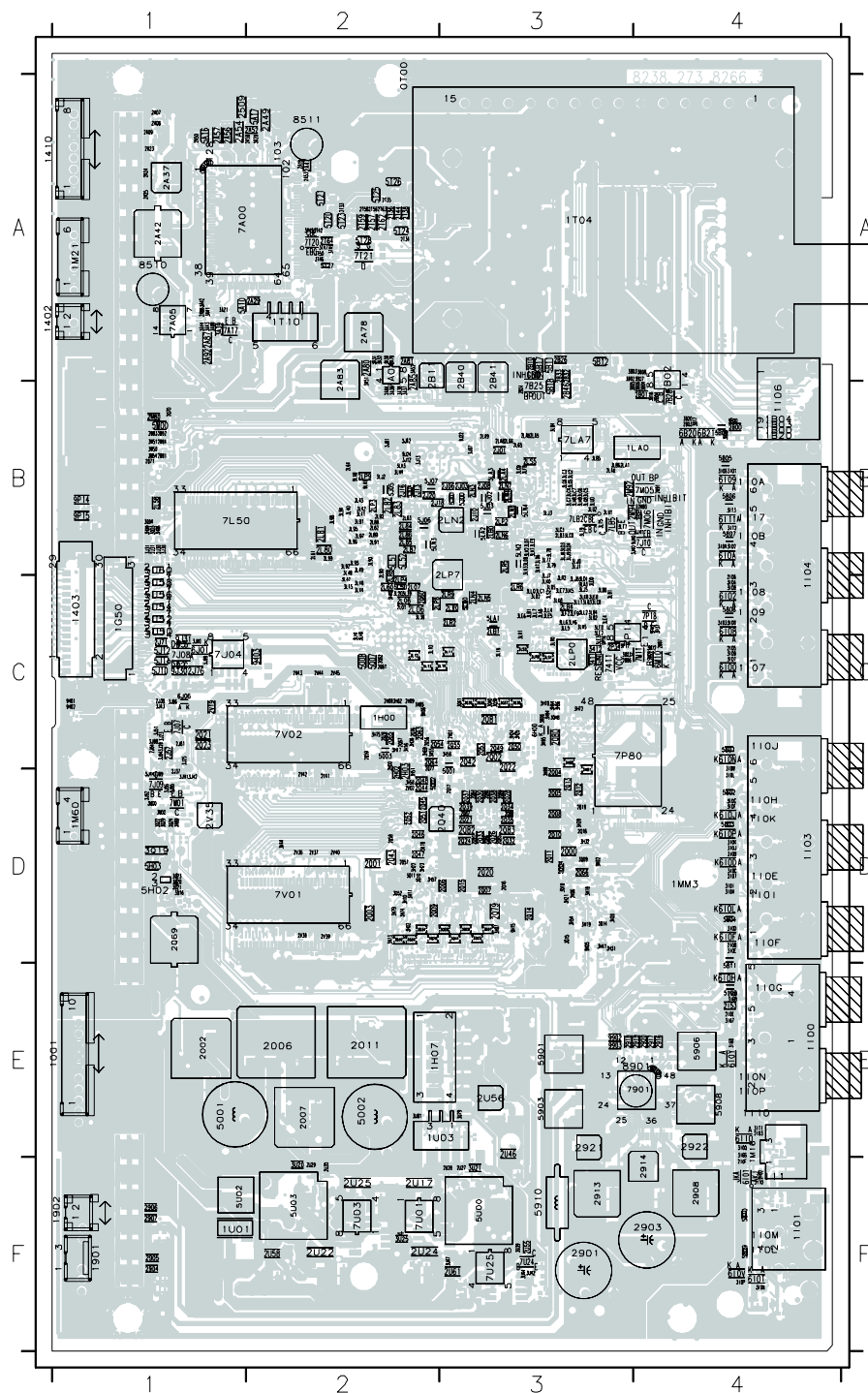


USB diagram

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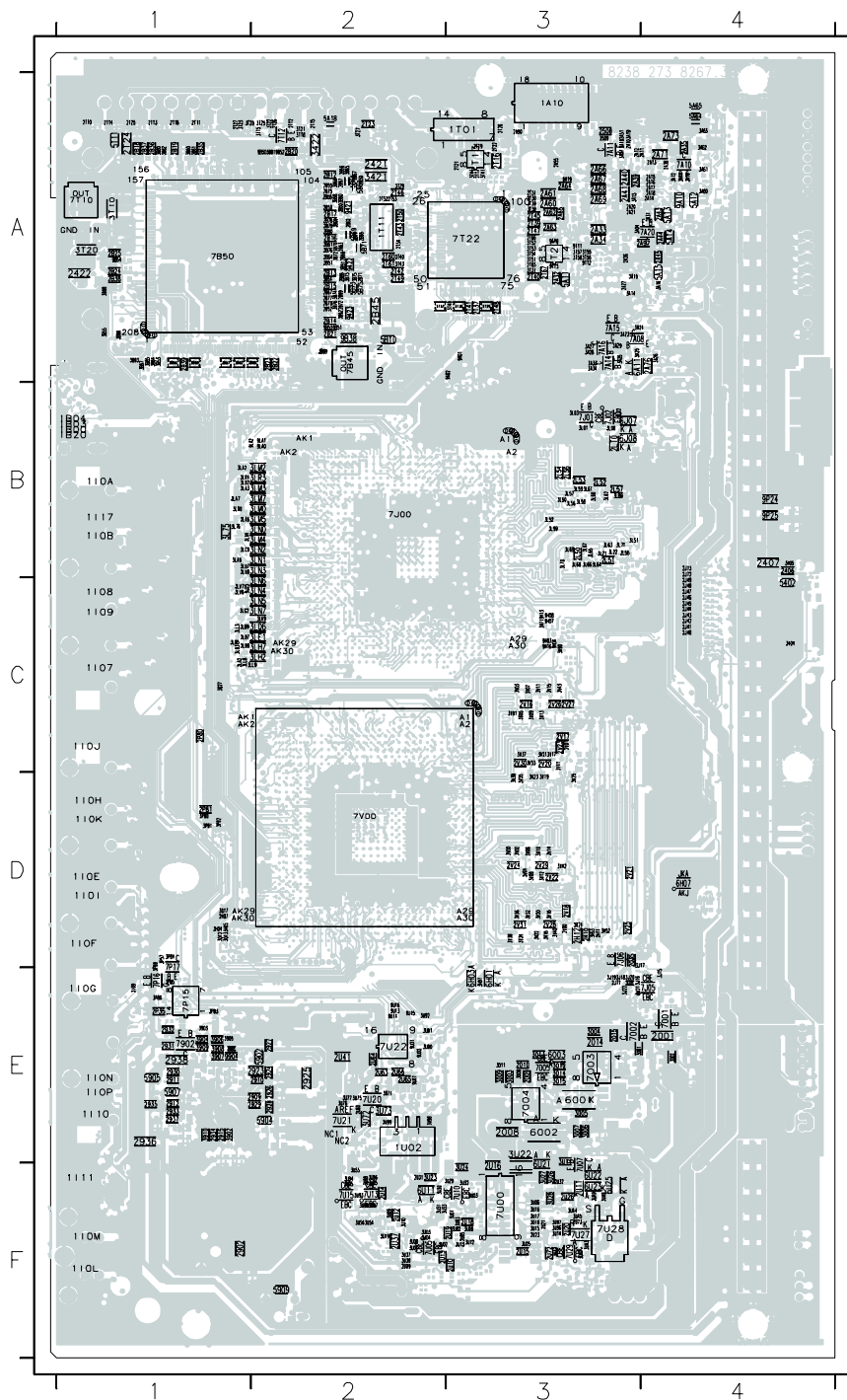


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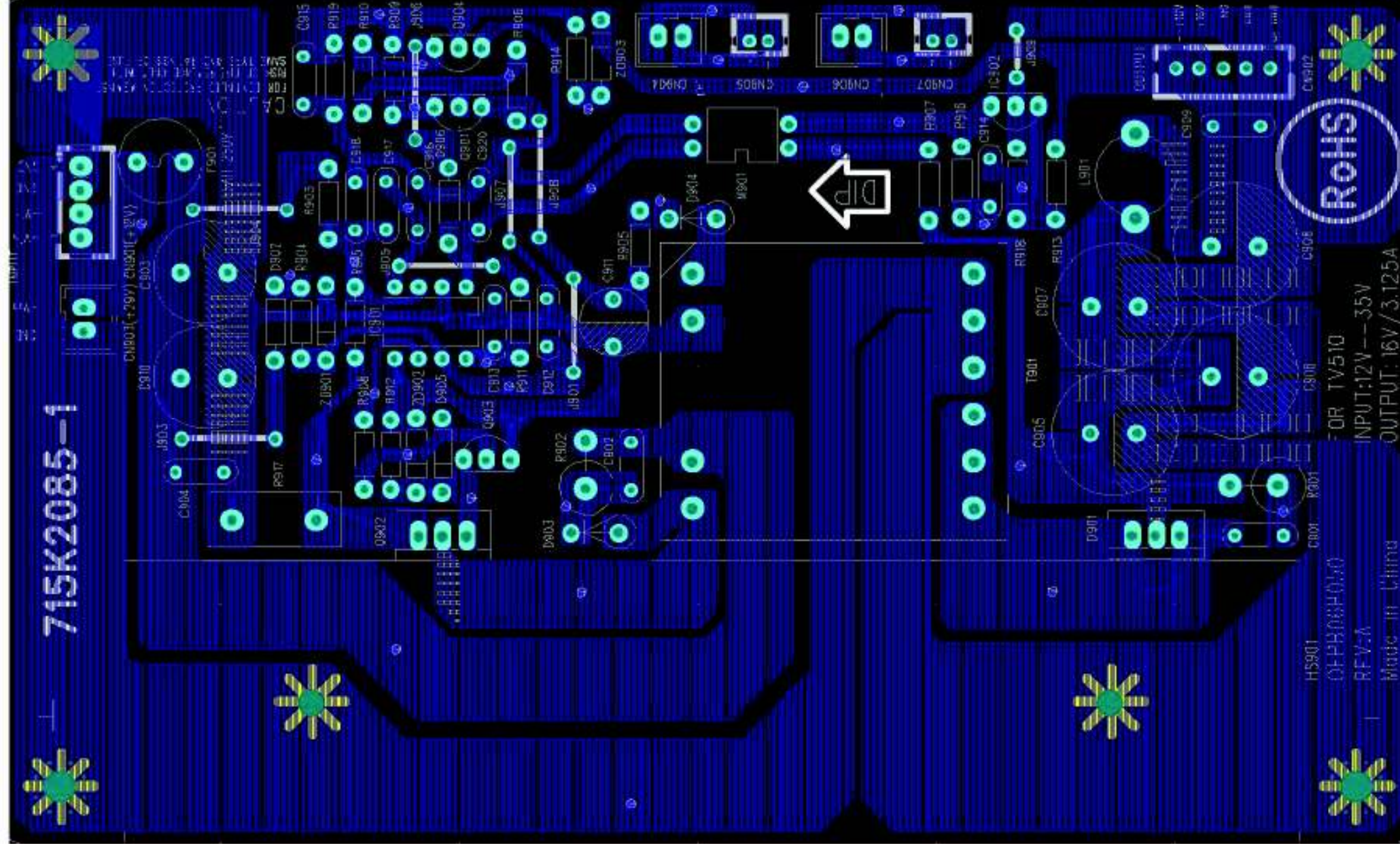


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1403	C1	2106	C4	2020	D3	3A44	A1	3J99	C1	3LS1	C3	5L52	B2
1410	D4	2107	D4	2021	C1	3A51	B2	3JA2	B2	3LS2	C3	5L53	B2
1901	F1	2108	E4	2022	D3	3A52	D2	3L10	C3	3L75	B3	5L54	B3
1902	F1	2109	E4	2023	C1	3B02	B4	3L11	C3	3L77	B4	5L55	B3
1800	B4	210E	F4	2024	D3	3B03	A4	3L12	C2	3L79	B3	5L56	B3
1803	B4	210F	F4	2026	D3	3B04	B4	3L13	C3	3L80	B3	5L57	B3
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1G50	C1	2J03	B3	2030	D3	3B07	B4	3L20	C2	3M00	D1	5L60	B3
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1H07	F3	2J08	B3	2033	C1	3B17	B4	3L39	C2	3M50	B1	5001	D3
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2H06	D3	2014	D3	3A37	B2	3J56	D1	3L17	C2	5U15	C1	9P42	A4
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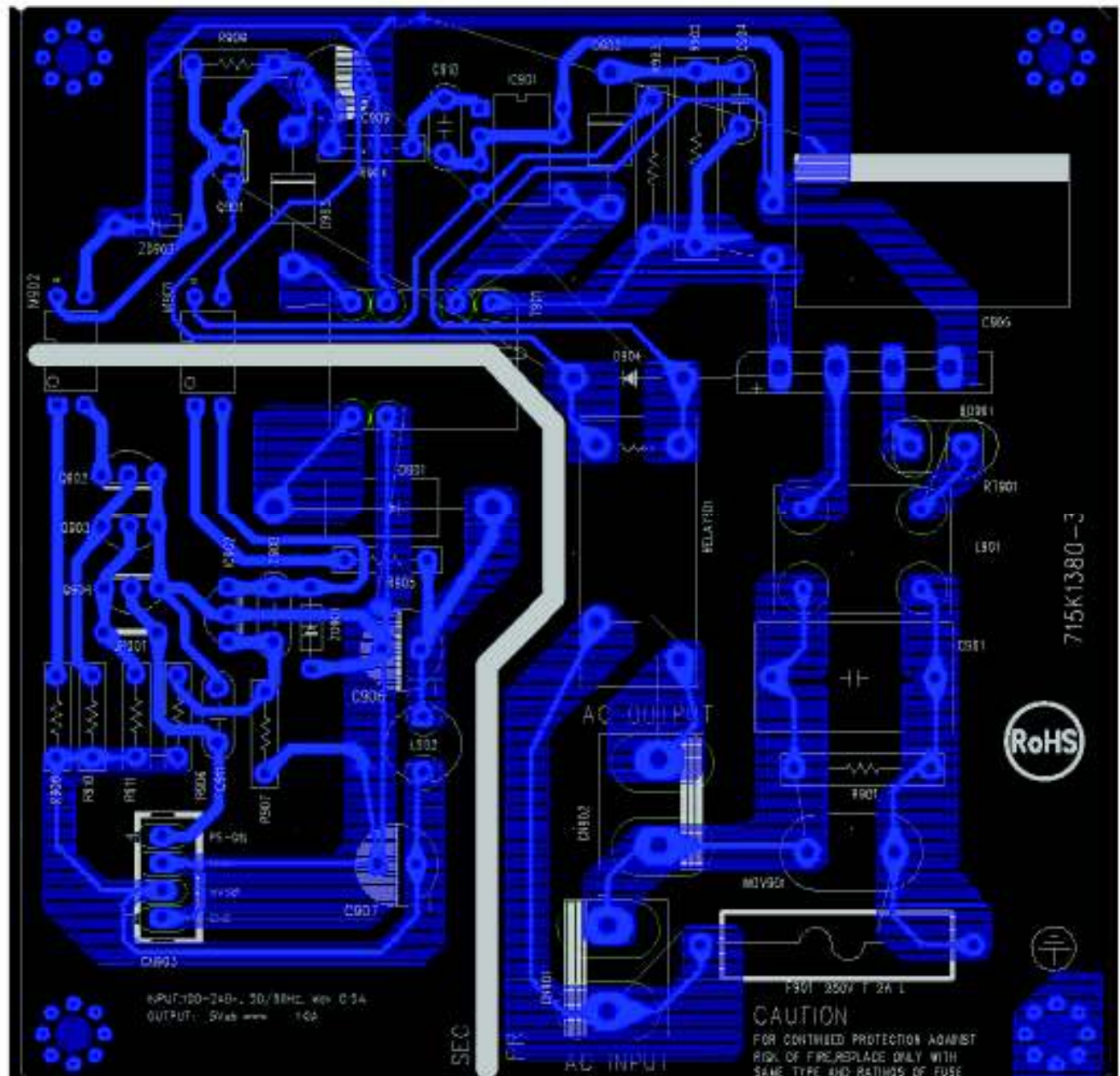


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2010	E3	2B78	A2	2V31	D3	3L57	B3	3U11	F2	6002	E3
2014	E4	2B81	A2	3001	F4	3L58	B3	3U12	F3	6003	E3
2015	E4	2B82	A2	3002	F4	3L59	B3	3U13	F3	6004	E3
2406	C4	2C35	E4	3003	E3	3L60	B3	3U14	F3	6H01	E3
2407	C4	2H07	D1	3004	F3	3L61	B3	3U15	F3	6H03	E3
2421	A2	2H10	D3	3005	F3	3L62	B3	3U16	F3	6H07	B4
2422	A1	2H11	D3	3006	F3	3L63	B3	3U17	F3	6J07	B4
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2911	E1	2J43	C4	3012	F3	3L68	C3	3U24	F3	6U23	F3
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2923	E2	2J46	C4	3015	E3	3L71	B4	3U28	F3	7002	E4
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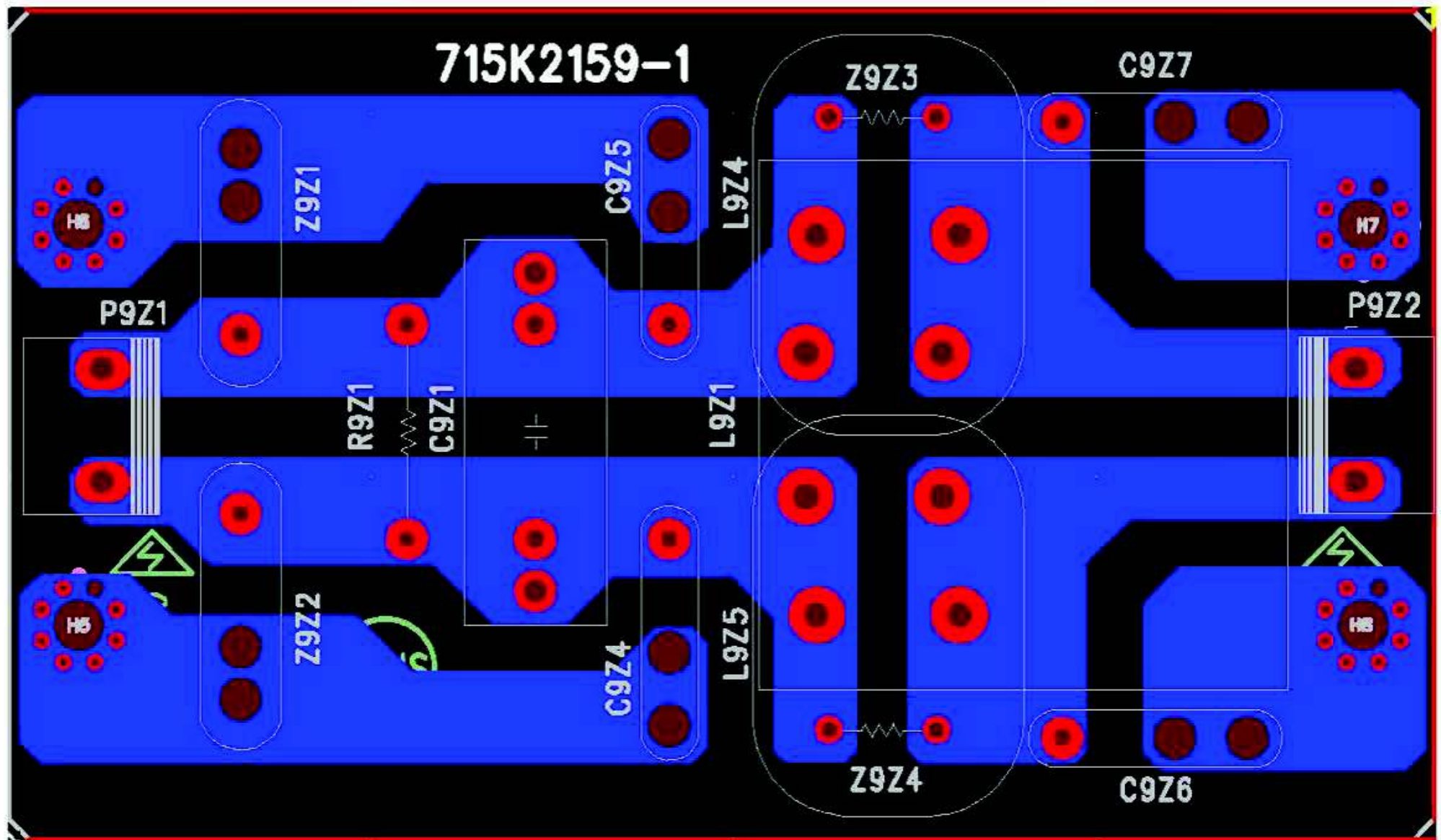


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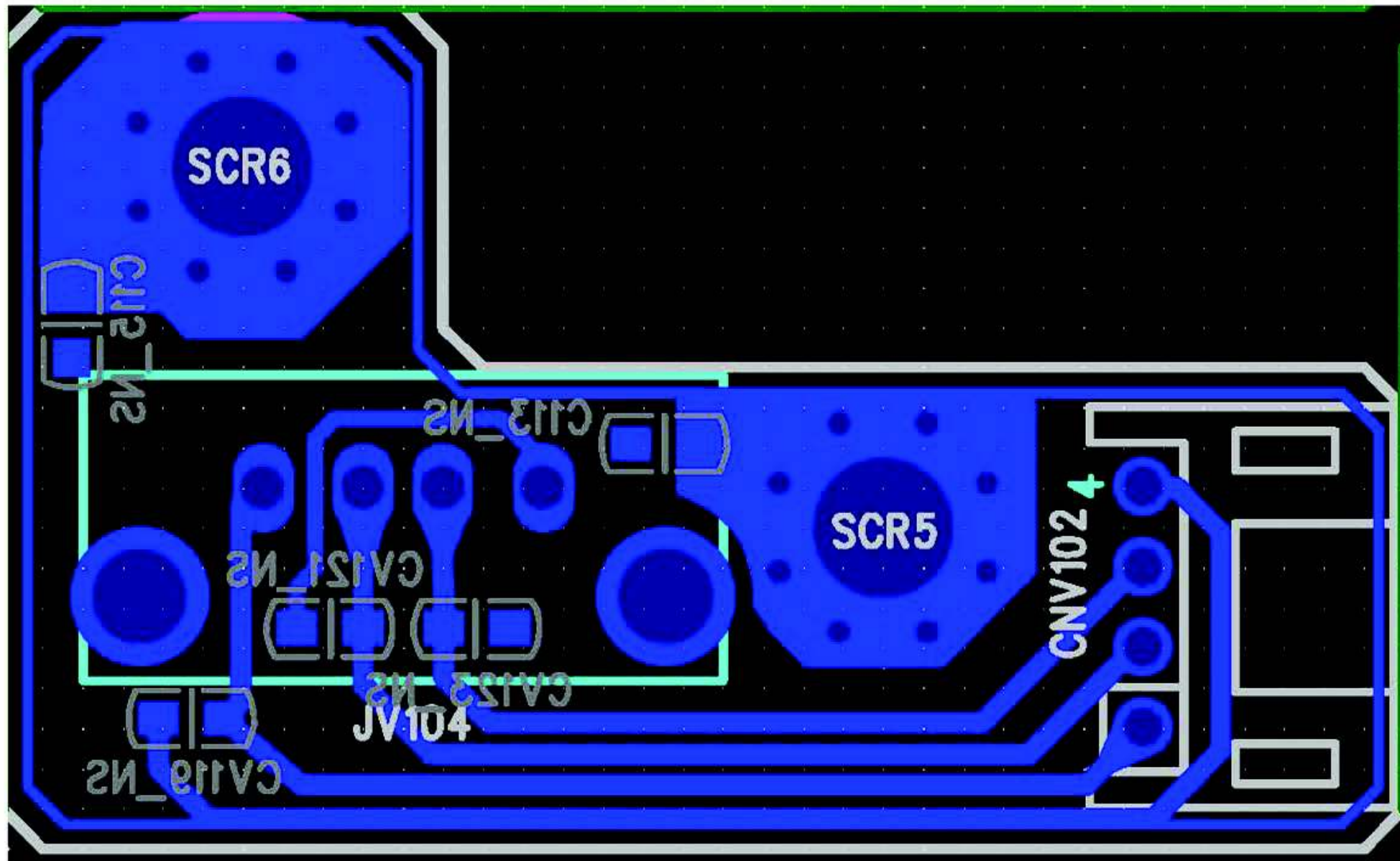
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TMPC4269A8P 715K2165-1



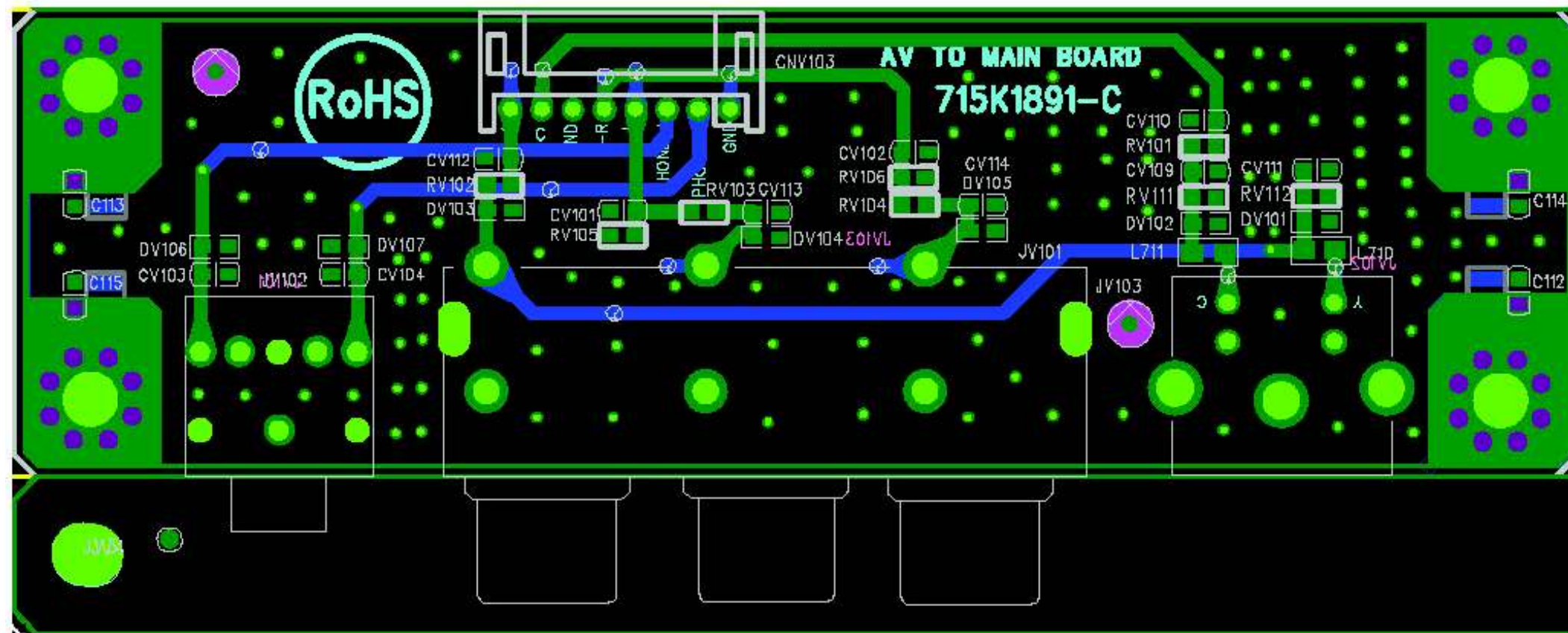
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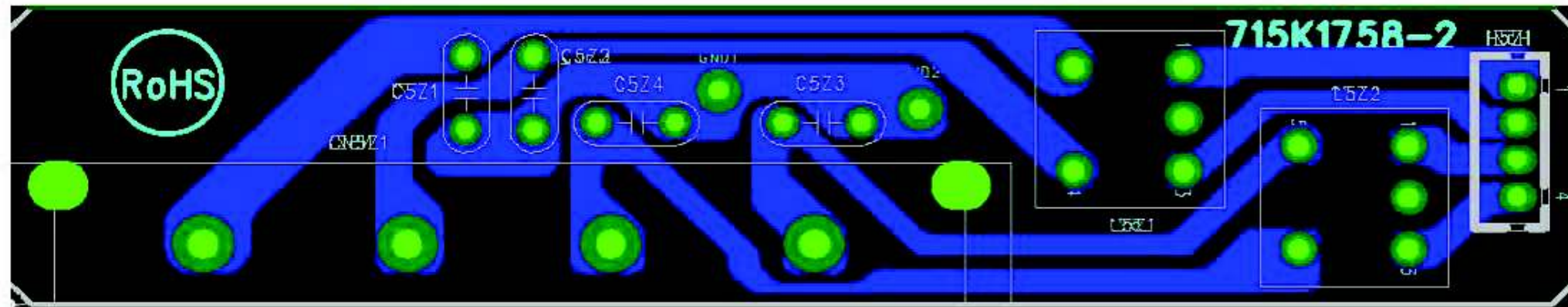
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TMPC4269Z4P

715K1891-1



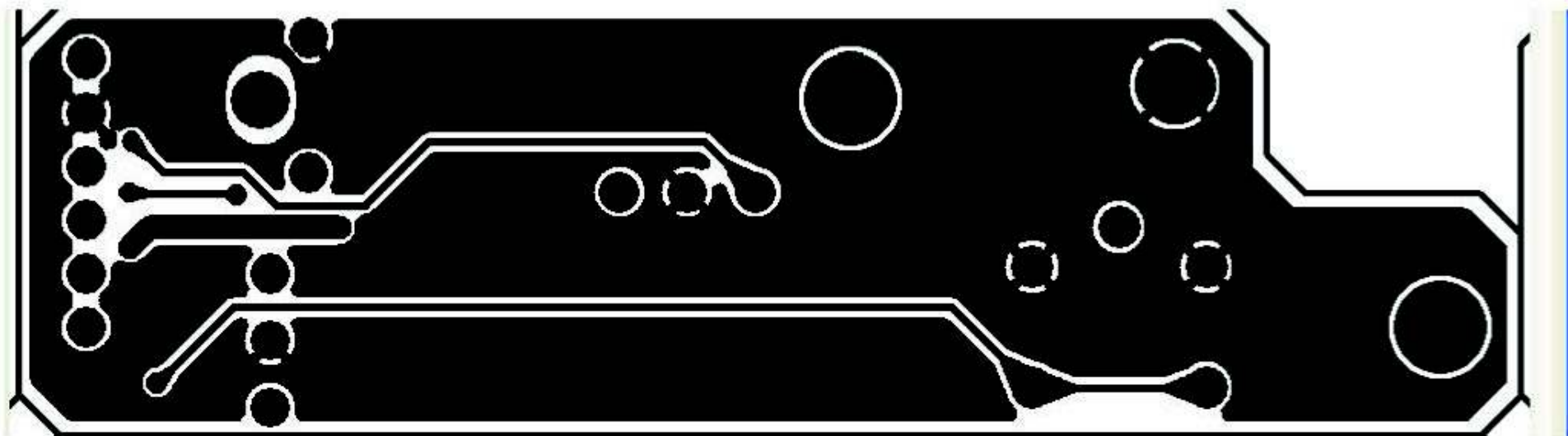
AUPC4269A8P 715K1758-2



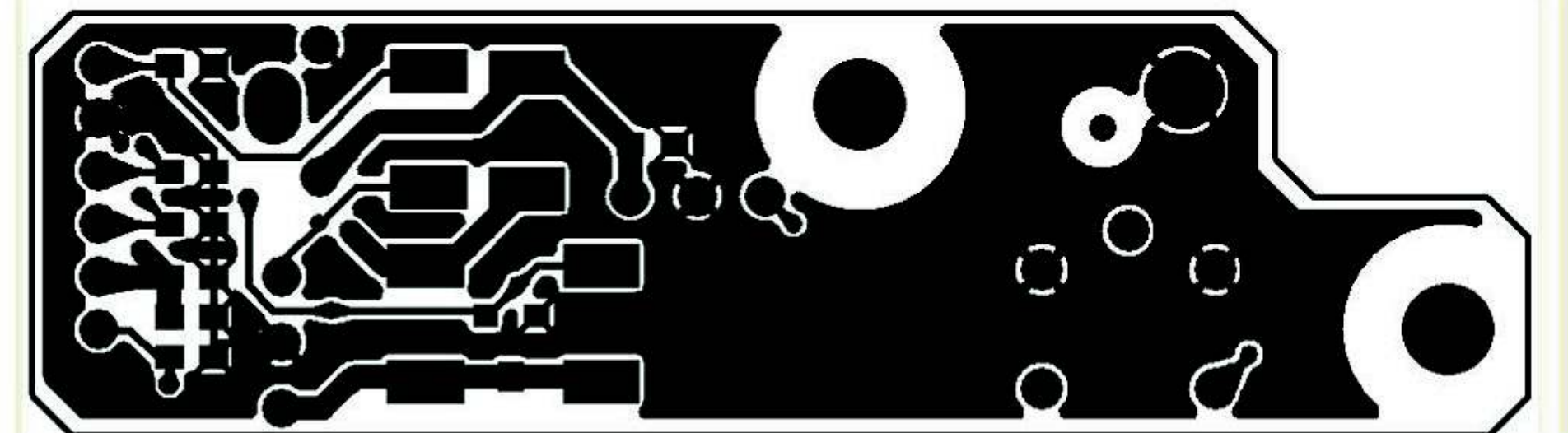
KEPC4269D6P 715K1973-1



KEPC4269D7P 715K1974-E(TOP)



KEPC4269D7P 715K1974-E(BOTTOM)



Recommended parts list

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TPV part no.	12NC	Description
750KPS42-V4-1	9965 000 39175	SDI 42" V4 PSP PANEL
98K F42-3-S	9965 000 34086	FILTER
AUPC4269A8P	9965 000 39176	EXTERNAL AUDIO SPEAKER
KEPC4269D6P	9965 000 39177	KEY BOARD
KEPC4269D7P	9965 000 39178	IR BOARD
MGPC5084P8P	9965 000 39179	TV510 MAIN BOARD
OFPB06P007P	9965 000 39180	POWER DOWN CONROL STANDB
OFPB06P050P	9965 000 39181	12V TO 16V POWER BOARD
PSPC4265P7P	9965 000 39182	PFPC
TMPC4269A8P	9965 000 39183	USB TERMINAL BOARD
TMPC4269Z4P	9965 000 39184	SIDE AV BOARD
73K 174-8A-LZ	9965 000 34116	AC EMI FILTER
95K 900-906	9965 000 34137	AC INPUT SOCKET TO EMI BOARD
95K205S-354-033	9965 000 39185	WIRE HARNESS
95K8013-2701-JT	9965 000 39186	KEY CABLE 600MM
95K8013-4701-JT	9965 000 39187	USB CABLE 360MM
95K8013-4702-JT	9965 000 39188	AUDIO CABLE 400MM
95K8013-6701-JT	9965 000 39189	IR CABLE 750MM
95K8013-8701-JT	9965 000 39190	SIDE AV CABLE 970MM
95K8013-1070-1JT	9965 000 39191	12V TO 16V POWER CABLE
95K8013-1070-2JT	9965 000 39192	16V- 5V POWER CABLE
95K8013-1170-2JT	9965 000 39193	2 PIN CABLE
95K8021-370-3JT	9965 000 39194	SHIELD WIRE HARNESS
95K8021-3-911	9965 000 34094	AC CABLE(3PIN 2LINES)
95K8022-31-703-D	9965 000 39195	LVDS CABLE
705KJ4K0-S34-001	9965 000 39196	BASE ASSEMBLY(SIDE SPK)
J33K9027-Q4-A	9965 000 39197	TOP KEY FOR MAG7
J33K9028-1	9965 000 39198	JENS FOR MAG7
J33K9029-Q4-A	9965 000 39199	POWER KEY
J34K8010-Q4-F	9965 000 39200	MAG7 BEZEL
J15K1047-35-1A	9965 000 39201	REAR COVER
J15K1048-42-1D	9965 000 39202	REAR LOW COVER
J15K1068-50-1C	9965 000 39203	SIDE AV COVER
J41K3401-510-2A	9965 000 39204	MANUAL
89K402A-18N-LS	9965 000 39205	POWER CORD
98KRAGD-1BE-PHR	9965 000 39206	REMOTE CONTROL

Recommended parts list

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Panel assy (9965 000 39175)

705PS42-V4-11	9965 000 39207	ASSY PCB BUFFER(E)
705PS42-V4-12	9965 000 39208	ASSY PCB BUFFER(F)
705PS42-V4-13	9965 000 39209	ASSY PCB BUFFER(Y-UPER)
705PS42-V4-14	9965 000 39210	ASSY PCB BUFFER(Y-LOWER)
705PS42-V4-15	9965 000 39211	ASSY PCB LOGIC BOARD
705PS42-V4-16	9965 000 39212	ASSY PCB Y MAIN
705PS42-V4-17	9965 000 39213	ASSY PCB X MAIN
705PS42-V4-18	9965 000 39214	SMPS